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(54) Title: NUCLEIC ACIDS, PROTEINS, AND ANTIBODIES

(57) Abstract: The present invention relates to novel ovarian related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "ovarian antigens", and the use of such ovarian antigens for detecting disorders of the ovaries and/or breast, particularly the presence of ovarian and/or breast cancer and ovarian and/or breast cancer metastases. More specifically, isolated ovarian associated nucleic acid molecules are provided encoding novel ovarian associated polypeptides. Novel ovarian polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human ovarian associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the ovaries and/or breast, including ovarian and/or breast cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

# Nucleic Acids, Proteins, and Antibodies

[0001] This application refers to a "Sequence Listing" that is provided on electronic media in computer readable form pursuant to Administrative Instructions Section 801(a)(i). The Sequence Listing forms a part of this description pursuant to Rule 5.2 and Administrative Instructions Sections 801 to 806, and is hereby incorporated in its entirety.

[0002] The Sequence Listing is provided as an electronic file (PA133PCTSL.txt, 7,347,875 bytes in size, created on 07 June 2001) on four identical compact discs (CD-R), labeled "COPY 1," "COPY 2," "COPY 3," and "CRF." The Sequence Listing complies with Annex C of the Administrative Instructions, and may be viewed, for example, on an IBM-PC machine running the MS-Windows operating system by using the V viewer software, version 2000 (see World Wide Web URL: http://www.fileviewer.com).

# Field of the Invention

[0003] The present invention relates to novel ovarian related polynucleotides, the polypeptides encoded by these polynucleotides herein collectively referred to as "ovarian antigens," and antibodies that immunospecifically bind these polypeptides, and the use of such ovarian polynucleotides, antigens, and antibodies for detecting, treating, preventing and/or prognosing disorders of the reproductive system, particularly disorders of the ovaries and/or breast, including, but not limited to, the presence of ovarian and/or breast cancer and ovarian and/or breast cancer metastases. More specifically, isolated ovarian nucleic acid molecules are provided encoding novel ovarian polypeptides. Novel ovarian

nucleic acid molecules are provided encoding novel ovarian polypeptides. Novel ovarian polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human ovarian polynucleotides, polypeptides, and/or antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the ovaries and/or breast, including ovarian and/or breast cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The invention further relates to methods and/or compositions for inhibiting or promoting the production and/or function of the polypeptides of the invention.

# Background of the Invention

[0004] The female reproductive system is comprised of both external and internal organs. The external organs function in permitting sperm to enter the body and protecting the internal genital organs from infection and injury. The internal organs form a pathway (the genital tract) for reproduction, beginning at the ovaries, through the fallopian tubes (oviducts) and uterus, to the birth canal (vagina).

[0005] The sexual and reproductive functions in the female can be divided into two major phases: first, preparation of the body for conception, and second, the gestation and parturition. Gestation and parturition only occur if an ovum becomes fertilized. If fertilization does not occur, the reproductive system undergoes a cycle to ensure frequent readiness for conception and fertilization.

[0006] The complexity of the female reproductive system renders it susceptible to several diseases and disorders. In particular, the ovaries and breast are subject to diseases and/or disorders such as infections, hyperproliferative disorders, as well as regulatory and genetic abnormalities.

#### Disorders of the Ovary

[0007] A woman's ovaries are located on both sides of the uterus, below the opening of the fallopian tubes (tubes that extend from the uterus to the ovaries). In

addition to producing egg cells for reproduction, the ovaries produce estrogen and progesterone, which affect many of the female characteristics and reproductive functions.

[0008] Anovulation (the absence of egg release by the ovaries) is a serious condition leading to infertility. The exact etiology of anovulation, especially in women with otherwise normal menstrual cycles, is unclear, however several potential causes are under study, including: impaired follicular development (probably due to low or absent estrogen production or binding), normal follicular development with lack of egg release (probably due to progesterone deficiency), or insufficient production of gonadotropin-releasing hormone from the hypothalamus. Current treatments include clomiphene injections or hormonal therapy, although both can lead to serious side effects such as ovarian cancer and ovarian hyperstimulation syndrome.

[0009] Anovulation is also associated with polycyctic ovary syndrome (also known as Stein-Leventhal syndrome). This syndrome is and endocrine disorder characterized by an elevated level of male hormones (androgens). Other than anovulation, symptoms include growth of male-patterned body hair (hirsutism), excessive acne, irregular or absent menses, excessive bleeding, and obesity. Usually, the ovaries appear enlarged and may contain many follicular cysts.

[0010] Ovarian cancer develops most often in women between the ages of 50 and 70. It is the third most common cancer of the female reproductive system, but more women die of ovarian cancers than of any other. Ovaries include a variety of cell types, each of which may give rise to a distinct type of cancer, including, but not limited to, ovarian epithelial cancer, ovarian germ cell tumors, ovarian papillary serous adenocarcinoma, ovarian mucinous adenocarcinoma, ovarian Krukenberg tumor, malignant mixed Mullerian tumors, and ovarian low malignant tumors.

[0011] Other disorders of the ovaries also include, but are not limited to, inflammatory disorders, such as oophoritis (e.g., caused by viral or bacterial infection), ovarian cysts, and autoimmune disorders (e.g., premature ovarian failure and autoimmune oophoritis).

### Disorders of the Breast

[0012] The breast is comprised of different structures, each with its own specific function. One-third of the breast is comprised of fatty tissue. The other two-thirds is made

up of structural components called ducts and lobules. Milk is produced in the lobules and funneled through the ducts to the nipple. Disorders of the breast typically involve the formation of lesions within breast tissue. While many of these lesions are benign in nature, they may lead to cancer if left untreated.

[0013] Benign breast lesions include, for example, cysts, which are non-cancerous, fluid-filled sacs that forma mass within breast tissue. The cause of breast cysts is unknown, though injury may be involved, and their main symptom is pain. While considered harmless, a professional should drain cysts and the fluid examined because cancer of the cyst wall, although quite rare, is possible.

[0014] Other benign breast lesions include fibrous breast lumps (fibroadenomas), breast infection (mastitis), intraductal papilloma, and abscesses. Fibrous breast lumps are small, solid lumps of glandular tissue. These lumps usually appear in young women, often in teenagers, and are easy to remove. Intraductal papilloma are small lumps located within a milk duct, often causing inappropriate discharge from the nipple. Breast abscesses are collections of pus in breast tissue that develop from breast infections that go untreated.

Breast cancer is the most common cancer among women, other than skin cancer and is the second leading cause of cancer death in women, after lung cancer. The American Cancer Society predicts that there will be about 182,800 new cases of invasive breast cancer in the year 2000 among women in this country and about 40,800 deaths from the disease. Breast cancer also occurs among men, although much less often. It is generally believed that this malignancy arises from a multi step process involving mutations in a relatively small number of genes, perhaps 10 or less. These mutations result in significant changes in the growth and differentiation of breast tissue that allow it to grow independent of normal cellular controls, to metastasize, and to escape immune surveillance. The genetic heterogeneity of most breast cancers suggests that they arise by a variety of initiating events and that the characteristics of individual cancers are due to the collective pattern of genetic changes that accumulate.

[0016] The discovery of new human ovarian associated polynucleotides, the polypeptides encoded by them, and antibodies that immunospecifically bind these polypeptides, satisfies a need in the art by providing new compositions which are useful in

the diagnosis, treatment, prevention and/or prognosis of disorders of the ovaries and/or breast, including, but not limited to, neoplastic disorders (e.g., ovarian Krukenberg tumor, malignant mixed Mullerian tumors, and/or as described under "Hyperproliferative Disorders" below), infectious diseases (e.g., mastitis, oophoritis, and/or as described under "Infectious Diseases" below), and inflammatory diseases (e.g., abcesses and/or as described under "Immune Disorders" below) and as described in "Reproductive System Disorders" below.

# Summary of the Invention

The present invention relates to novel ovarian related polynucleotides, the [0017] polypeptides encoded by these polynucleotides herein collectively referred to as "ovarian antigens," and antibodies that immunospecifically bind these polypeptides, and the use of such ovarian polynucleotides, antigens, and antibodies for detecting, treating, preventing and/or prognosing disorders of the reproductive system, particularly disorders of the ovaries and/or breast, including, but not limited to, the presence of ovarian and/or breast cancer and ovarian and/or breast cancer metastases. More specifically, isolated ovarian nucleic acid molecules are provided encoding novel ovarian polypeptides. Novel ovarian polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human ovarian polynucleotides, polypeptides, and/or antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the ovaries and/or breast, including ovarian and/or breast cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The invention further relates to methods and/or compositions for inhibiting or promoting the production and/or function of the polypeptides of the invention.

# **Detailed Description**

## **Tables**

Table 1 summarizes some of the polynucleotides encompassed by the [0018]invention (including cDNA clones related to the sequences (Clone ID NO:Z), contig sequences (contig identifier (Contig ID:) and contig nucleotide sequence identifier (SEQ ID NO:X)) and further summarizes certain characteristics of these polynucleotides and the polypeptides encoded thereby. The first column provides a unique clone identifier, "Clone ID NO:Z", for a cDNA plasmid related to each ovarian associated contig sequence disclosed in Table 1. The second column provides a unique contig identifier, "Contig ID:" for each of the contig sequences disclosed in Table 1. The third column provides the sequence identifier, "SEQ ID NO:X", for each of the contig polynucleotide sequences disclosed in Table 1. The fourth column, "ORF (From-To)", provides the location (i.e., nucleotide position numbers) within the polynucleotide sequence of SEQ ID NO:X that delineate the preferred open reading frame (ORF) shown in the sequence listing and referenced in Table 1 as SEQ ID NO:Y (column 5). Column 6 lists residues comprising predicted epitopes contained in the polypeptides encoded by each of the preferred ORFs (SEQ ID NO:Y). Identification of potential immunogenic regions was performed according to the method of Jameson and Wolf (CABIOS, 4:181-186 (1988)); specifically, the Genetics Computer Group (GCG) implementation of this algorithm, embodied in the program PEPTIDESTRUCTURE (Wisconsin Package v10.0, Genetics Computer Group (GCG), Madison, Wisc.). This method returns a measure of the probability that a given residue is found on the surface of the protein. Regions where the antigenic index score is greater than 0.9 over at least 6 amino acids are indicated in Table 1 as "Predicted Epitopes." In particular embodiments, ovarian associated polypeptides of the invention comprise, or alternatively consist of, one, two, three, four, five or more of the predicted epitopes described in Table 1. It will be appreciated that depending on the analytical criteria used to predict antigenic determinants, the exact address of the determinant may vary slightly. Column 7, "Tissue Distribution" shows the expression profile of tissue, cells, and/or cell line libraries which express the polynucleotides of the invention. The first number in column 7 (preceding the colon), represents the tissue/cell source identifier

code corresponding to the code and description provided in Table 4. Expression of these polynucleotides was not observed in the other tissues and/or cell libraries tested. For those identifier codes in which the first two letters are not "AR", the second number in column 7 (following the colon), represents the number of times a sequence corresponding to the reference polynucleotide sequence (e.g., SEQ ID NO:X) was identified in the tissue/cell source. Those tissue/cell source identifier codes in which the first two letters are "AR" designate information generated using DNA array technology. Utilizing this technology, cDNAs were amplified by PCR and then transferred, in duplicate, onto the array. Gene expression was assayed through hybridization of first strand cDNA probes to the DNA array, cDNA probes were generated from total RNA extracted from a variety of different tissues and cell lines. Probe synthesis was performed in the presence of <sup>33</sup>P dCTP, using oligo(dT) to prime reverse transcription. After hybridization, high stringency washing conditions were employed to remove non-specific hybrids from the array. The remaining signal, emanating from each gene target, was measured using a Phosphorimager. Gene expression was reported as Phosphor Stimulating Luminescence (PSL) which reflects the level of phosphor signal generated from the probe hybridized to each of the gene targets represented on the array. A local background signal subtraction was performed before the total signal generated from each array was used to normalize gene expression between the different hybridizations. The value presented after "[array code]:" represents the mean of the duplicate values, following background subtraction and probe normalization. One of skill in the art could routinely use this information to identify normal and/or diseased tissue(s) which show a predominant expression pattern of the corresponding polynucleotide of the invention or to identify polynucleotides which show predominant and/or specific tissue and/or cell expression. Column 8, "Cytologic Band," provides the chromosomal location of polynucleotides corresponding to SEQ ID NO:X. Chromosomal location was determined by finding exact matches to EST and cDNA sequences contained in the NCBI (National Center for Biotechnology Information) UniGene database. Given a presumptive chromosomal location, disease locus association was determined by comparison with the Morbid Map, derived from Online Mendelian Inheritance in Man (Online Mendelian Inheritance in Man, OMIM<sup>TM</sup>. McKusick-Nathans Institute for Genetic Medicine, Johns Hopkins University (Baltimore, MD) and National Center for Biotechnology Information, National Library of Medicine (Bethesda, MD) 2000. World

Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/). If the putative chromosomal location of the Query overlapped with the chromosomal location of a Morbid Map entry, an OMIM identification number is provided in column 9 labeled "OMIM Disease Reference(s)". A key to the OMIM reference identification numbers is provided in Table 5.

[0019] Table 2 summarizes homology and features of some of the polypeptides of the invention. The first column provides a unique clone identifier, "Clone ID NO:Z", corresponding to a cDNA disclosed in Table 1. The second column provides the unique contig identifier, "Contig ID:" corresponding to contigs in Table 1 and allowing for correlation with the information in Table 1. The third column provides the sequence identifier, "SEQ ID NO:X", for the contig polynucleotide sequences. The fourth column provides the analysis method by which the homology/identity disclosed in the row was determined. Comparisons were made between polypeptides encoded by the polynucleotides of the invention and either a non-redundant protein database (herein referred to as "NR"), or a database of protein families (herein referred to as "PFAM") as further described below. The fifth column provides a description of PFAM/NR hits having significant matches to a polypeptide of the invention. Column six provides the accession number of the PFAM/NR hit disclosed in the fifth column. Column seven, "Score/Percent Identity", provides a quality score or the percent identity, of the hit disclosed in column five. Columns 8 and 9, "NT From" and "NT To" respectively, delineate the polynucleotides in "SEQ ID NO:X" that encode a polypeptide having a significant match to the PFAM/NR database as disclosed in the fifth column. In specific embodiments, polypeptides of the invention comprise, or alternatively consist of, an amino acid sequence encoded by the polynucleotides in SEO ID NO:X as delineated in columns 8 and 9, or fragments or variants thereof.

Table 3 provides polynucleotide sequences that may be disclaimed according to certain embodiments of the invention. The first column provides a unique clone identifier, "Clone ID NO:Z", for a cDNA clone related to ovarian associated contig sequences disclosed in Table 1. The second column provides the sequence identifier, "SEQ ID NO:X", for contig polynucleotide sequences disclosed in Table 1. The third column provides the unique contig identifier, "Contig ID", for contigs disclosed in Table 1. The fourth column provides a unique integer 'a' where 'a' is any integer between 1 and

the final nucleotide minus 15 of SEQ ID NO:X, represented as "Range of a", and the fifth column provides a unique integer 'b' where 'b' is any integer between 15 and the final nucleotide of SEQ ID NO:X, represented as "Range of b", where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:X, and where b is greater than or equal to a + 14. For each of the polynucleotides shown as SEQ ID NO:X, the uniquely defined integers can be substituted into the general formula of a-b, and used to describe polynucleotides which may be preferably excluded from the invention. In certain embodiments, preferably excluded from the polynucleotides of the invention (including polynucleotide fragments and variants as described herein and diagnostic and/or therapeutic uses based on these polynucleotides) are at least one, two, three, four, five, ten, or more of the polynucleotide sequence(s) having the accession number(s) disclosed in the sixth column of this Table. In further embodiments, preferably excluded from the invention are the specific polynucleotide sequence(s) contained in the clones corresponding to at least one, two, three, four, five, ten, or more of the available material having the accession numbers identified in the sixth column of this Table.

Table 4 provides a key to the tissue/cell source identifier code disclosed in Table 1, column 7. Column 1 provides the key to the tissue/cell source identifier code disclosed in Table 1, Column 7. Columns 2-5 provide a description of the tissue or cell source. Codes corresponding to diseased tissues are indicated in column 6 with the word "disease". The use of the word "disease" in column 6 is non-limiting. The tissue or cell source may be specific (e.g. a neoplasm), or may be disease-associated (e.g., a tissue sample from a normal portion of a diseased organ). Furthermore, tissues and/or cells lacking the "disease" designation may still be derived from sources directly or indirectly involved in a disease state or disorder, and therefore may have a further utility in that disease state or disorder. In numerous cases where the tissue/cell source is a library, column 7 identifies the vector used to generate the library.

Table 5 provides a key to the OMIM<sup>TM</sup> reference identification numbers disclosed in Table 1, column 9. OMIM reference identification numbers (Column 1) were derived from Online Mendelian Inheritance in Man (Online Mendelian Inheritance in Man, OMIM<sup>TM</sup>. McKusick-Nathans Institute for Genetic Medicine, Johns Hopkins University (Baltimore, MD) and National Center for Biotechnology Information, National Library of Medicine, (Bethesda, MD) 2000. World Wide Web URL:

http://www.ncbi.nlm.nih.gov/omim/). Column 2 provides diseases associated with the cytologic band disclosed in Table 1, column 8, as determined from the Morbid Map database.

[0023] Table 6 summarizes ATCC Deposits, Deposit dates, and ATCC designation numbers of deposits made with the ATCC in connection with the present application.

[0024] Table 7 shows the cDNA libraries sequenced, tissue source description, vector information and ATCC designation numbers relating to these cDNA libraries.

## **Definitions**

[0025] The following definitions are provided to facilitate understanding of certain terms used throughout this specification.

[0026] In the present invention, "isolated" refers to material removed from its original environment (e.g., the natural environment if it is naturally occurring), and thus is altered "by the hand of man" from its natural state. For example, an isolated polynucleotide could be part of a vector or a composition of matter, or could be contained within a cell, and still be "isolated" because that vector, composition of matter, or particular cell is not the original environment of the polynucleotide. The term "isolated" does not refer to genomic or cDNA libraries, whole cell total or mRNA preparations, genomic DNA preparations (including those separated by electrophoresis and transferred onto blots), sheared whole cell genomic DNA preparations or other compositions where the art demonstrates no distinguishing features of the polynucleotide sequences of the present invention.

[0027] As used herein, a "polynucleotide" refers to a molecule having a nucleic acid sequence encoding SEQ ID NO:Y or a fragment or variant thereof; a nucleic acid sequence contained in SEQ ID NO:X (as described in column 3 of Table 1) or the complement thereof; or a cDNA sequence contained in Clone ID NO:Z (as described in column 1 of Table 1 and contained within a library deposited with the ATCC). For example, the polynucleotide can contain the nucleotide sequence of the full length cDNA sequence, including the 5' and 3' untranslated sequences, the coding region, as well as fragments, epitopes, domains, and variants of the nucleic acid sequence. Moreover, as used herein, a "polypeptide" refers to a molecule having an amino acid sequence encoded by a polynucleotide of the invention as broadly defined (obviously excluding poly-

Phenylalanine or poly-Lysine peptide sequences which result from translation of a polyA tail of a sequence corresponding to a cDNA).

[0028] As used herein, an "ovarian antigen" refers collectively to any polynucleotide disclosed herein (e.g., a nucleic acid sequence contained in SEQ ID NO:X or the complement therof, or cDNA sequence contained in Clone ID NO:Z, (e.g., a nucleic acid sequence contained in SEQ ID NO:X or the complement thereof, or cDNA sequence contained in Clone ID NO:Z, and fragments or variants thereof as described herein) or any polypeptide disclosed herein (e.g., an amino acid sequence contained in SEQ ID NO:Y, an amino acid sequence encoded by SEQ ID NO:X, or the complement thereof, an amino acid sequence encoded by the cDNA sequence contained in Clone ID NO:Z, and fragments or variants thereof as described herein). These ovarian antigens have been determined to be predominantly expressed in ovarian tissues, including normal or diseased tissues (as shown in Table 1 column 7 and Table 4).

In the present invention, "SEQ ID NO:X" was often generated by [0029] overlapping sequences contained in multiple clones (contig analysis). A representative clone containing all or most of the sequence for SEQ ID NO:X is deposited at Human Genome Sciences, Inc. (HGS) in a catalogued and archived library. As shown, for example, in column 1 of Table 1, each clone is identified by a cDNA Clone ID (identifier generally referred to herein as Clone ID NO:Z). Each Clone ID is unique to an individual clone and the Clone ID is all the information needed to retrieve a given clone from the HGS library. Furthermore, certain clones disclosed in this application have been deposited with the ATCC on June 5, 2000 and were given ATCC Deposit Nos. PTA-1982 and PTA-1985. In addition to the individual cDNA clone deposits, most of the cDNA libraries from which the clones were derived were deposited at the American Type Culture Collection (hereinafter "ATCC"). Table 7 provides a list of the deposited cDNA libraries. One can use the Clone ID NO:Z to determine the library source by reference to Tables 6 and 7. Table 7 lists the deposited cDNA libraries by name and links each library to an ATCC Deposit. Library names contain four characters, for example, "HTWE." The name of a cDNA clone (Clone ID NO:Z) isolated from that library begins with the same four characters, for example "HTWEP07". As mentioned below, Table 1 correlates the Clone ID NO:Z names with SEQ ID NO:X. Thus, starting with an SEQ ID NO:X, one can use Tables 1A, 6 and 7 to determine the corresponding Clone ID NO:Z, which library it came

from and which ATCC deposit the library is contained in. Furthermore, it is possible to retrieve a given cDNA clone from the source library by techniques known in the art and described elsewhere herein. The ATCC is located at 10801 University Boulevard, Manassas, Virginia 20110-2209, USA. The ATCC deposits were made pursuant to the terms of the Budapest Treaty on the international recognition of the deposit of microorganisms for the purposes of patent procedure.

In specific embodiments, the polynucleotides of the invention are at least 15, at least 30, at least 50, at least 100, at least 125, at least 500, or at least 1000 continuous nucleotides but are less than or equal to 300 kb, 200 kb, 100 kb, 50 kb, 15 kb, 10 kb, 7.5 kb, 5 kb, 2.5 kb, 2.0 kb, or 1 kb, in length. In a further embodiment, polynucleotides of the invention comprise a portion of the coding sequences, as disclosed herein, but do not comprise all or a portion of any intron. In another embodiment, the polynucleotides comprising coding sequences do not contain coding sequences of a genomic flanking gene (i.e., 5' or 3' to the gene of interest in the genome). In other embodiments, the polynucleotides of the invention do not contain the coding sequence of more than 1000, 500, 250, 100, 50, 25, 20, 15, 10, 5, 4, 3, 2, or 1 genomic flanking gene(s).

[0031] A "polynucleotide" of the present invention also includes those polynucleotides capable of hybridizing, under stringent hybridization conditions, to sequences contained in SEQ ID NO:X, or the complement thereof (e.g., the complement of any one, two, three, four, or more of the polynucleotide fragments described herein), the polynucleotide sequence delineated in columns 8 and 9 of Table 2 or the complement thereof, and/or cDNA sequences contained in Clone ID NO:Z (e.g., the complement of any one, two, three, four, or more of the polynucleotide fragments, ans/or the cDNA clone within the pool of cDNA clones deposited with the ATCC, described herein). "Stringent hybridization conditions" refers to an overnight incubation at 42 degree C in a solution comprising 50% formamide, 5x SSC (750 mM NaCl, 75 mM trisodium citrate), 50 mM sodium phosphate (pH 7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 μg/ml denatured, sheared salmon sperm DNA, followed by washing the filters in 0.1x SSC at about 65 degree C.

[0032] Also contemplated are nucleic acid molecules that hybridize to the polynucleotides of the present invention at lower stringency hybridization conditions.

Changes in the stringency of hybridization and signal detection are primarily accomplished through the manipulation of formamide concentration (lower percentages of formamide result in lowered stringency), salt conditions, or temperature. For example, lower stringency conditions include an overnight incubation at 37 degree C in a solution comprising 6X SSPE (20X SSPE = 3M NaCl; 0.2M NaH<sub>2</sub>PO<sub>4</sub>; 0.02M EDTA, pH 7.4), 0.5% SDS, 30% formamide, 100 ug/ml salmon sperm blocking DNA; followed by washes at 50 degree C with 1XSSPE, 0.1% SDS. In addition, to achieve even lower stringency, washes performed following stringent hybridization can be done at higher salt concentrations (e.g. 5X SSC).

[0033] Note that variations in the above conditions may be accomplished through the inclusion and/or substitution of alternate blocking reagents used to suppress background in hybridization experiments. Typical blocking reagents include Denhardt's reagent, BLOTTO, heparin, denatured salmon sperm DNA, and commercially available proprietary formulations. The inclusion of specific blocking reagents may require modification of the hybridization conditions described above, due to problems with compatibility.

[0034] Of course, a polynucleotide which hybridizes only to polyA+ sequences (such as any 3' terminal polyA+ tract of a cDNA shown in the sequence listing), or to a complementary stretch of T (or U) residues, would not be included in the definition of "polynucleotide," since such a polynucleotide would hybridize to any nucleic acid molecule containing a poly (A) stretch or the complement thereof (e.g., practically any double-stranded cDNA clone generated using oligo dT as a primer).

[0035] The polynucleotide of the present invention can be composed of any polyribonucleotide or polydeoxribonucleotide, which may be unmodified RNA or DNA or modified RNA or DNA. For example, polynucleotides can be composed of single- and double-stranded DNA, DNA that is a mixture of single- and double-stranded regions, single- and double-stranded RNA, and RNA that is mixture of single- and double-stranded regions, hybrid molecules comprising DNA and RNA that may be single-stranded or, more typically, double-stranded or a mixture of single- and double-stranded regions. In addition, the polynucleotide can be composed of triple-stranded regions comprising RNA or DNA or both RNA and DNA. A polynucleotide may also contain one or more modified bases or DNA or RNA backbones modified for stability or for other reasons.

"Modified" bases include, for example, tritylated bases and unusual bases such as inosine. A variety of modifications can be made to DNA and RNA; thus, "polynucleotide" embraces chemically, enzymatically, or metabolically modified forms.

The polypeptide of the present invention can be composed of amino acids [0036] joined to each other by peptide bonds or modified peptide bonds, i.e., peptide isosteres, and may contain amino acids other than the 20 gene-encoded amino acids. The polypeptides may be modified by either natural processes, such as posttranslational processing, or by chemical modification techniques which are well known in the art. Such modifications are well described in basic texts and in more detailed monographs, as well as in a voluminous research literature. Modifications can occur anywhere in a polypeptide, including the peptide backbone, the amino acid side-chains and the amino or carboxyl termini. It will be appreciated that the same type of modification may be present in the same or varying degrees at several sites in a given polypeptide. Also, a given polypeptide may contain many types of modifications. Polypeptides may be branched, for example, as a result of ubiquitination, and they may be cyclic, with or without branching. Cyclic, branched, and branched cyclic polypeptides may result from posttranslation natural processes or may be made by synthetic methods. Modifications include acetylation, acylation, ADP-ribosylation, amidation, covalent attachment of flavin, covalent attachment of a heme moiety, covalent attachment of a nucleotide or nucleotide derivative, covalent attachment of a lipid or lipid derivative, covalent attachment of phosphotidylinositol, cross-linking, cyclization, disulfide bond formation, demethylation, formation of covalent cross-links, formation of cysteine, formation of pyroglutamate, formylation, gamma-carboxylation, glycosylation, GPI anchor formation, hydroxylation, iodination, methylation, myristoylation, oxidation, pegylation, proteolytic processing, phosphorylation, prenylation, racemization, selenoylation, sulfation, transfer-RNA mediated addition of amino acids to proteins such as arginylation, and ubiquitination. (See, for instance, PROTEINS - STRUCTURE AND MOLECULAR PROPERTIES, 2nd Creighton, W. H. Freeman and Company, New York (1993); Ed., T. POSTTRANSLATIONAL COVALENT MODIFICATION OF PROTEINS, B. C. Johnson, Ed., Academic Press, New York, pgs. 1-12 (1983); Seifter et al., Meth. Enzymol. 182:626-646 (1990); Rattan et al., Ann. N.Y. Acad. Sci. 663:48-62 (1992).)

"SEQ ID NO:X" refers to a polynucleotide sequence described, for example, in Tables 1A or 2, while "SEQ ID NO:Y" refers to a polypeptide sequence described in column 5 of Table 1. SEQ ID NO:X is identified by an integer specified in column 3 of Table 1. The polypeptide sequence SEQ ID NO:Y is a translated open reading frame (ORF) encoded by polynucleotide SEQ ID NO:X. "Clone ID NO:Z" refers to a cDNA clone described in column 1 of Table 1.

[0038] "A polypeptide having biological activity" refers to a polypeptide exhibiting activity similar to, but not necessarily identical to, an activity of a polypeptide of the present invention, including mature forms, as measured in a particular biological assay, with or without dose dependency. In the case where dose dependency does exist, it need not be identical to that of the polypeptide, but rather substantially similar to the dose-dependence in a given activity as compared to the polypeptide of the present invention (i.e., the candidate polypeptide will exhibit greater activity or not more than about 25-fold less and, preferably, not more than about tenfold less activity, and most preferably, not more than about three-fold less activity relative to the polypeptide of the present invention).

[0039] Table 1 summarizes some of the polynucleotides encompassed by the invention (including contig sequences (SEQ ID NO:X) and clones (Clone ID NO:Z) and further summarizes certain characteristics of these polynucleotides and the polypeptides encoded thereby.

#### Polynucleotides and Polypeptides

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| OMIM                | Disease             | Reference(s):     |                |           |                     |                                       |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   | ,                   |                     |                     |
| Cytologic           | Band                |                   |                |           |                     |                                       |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Tissue Distribution | Library code: count | (see Table IV for | Library Codes) | H0428: 2  | L0744: 5, L0758: 5, | L0766: 4, L0803: 4,                   | L0439: 4, L0759: 4, | H0657: 3, H0341: 3, | L0794: 3, H0648: 3, | L0747: 3, L0752: 3, | S0422: 2, L0598: 2, | L0770: 2, L0809: 2, | H0696: 2, L0742: 2, | L0755: 2, H0716: 1, | S0116: 1, H0638: 1, | S0444: 1, S0360: 1, | H0637: 1, H0580: 1, | S0007: 1, L0586: 1, | H0156: 1, H0599: 1, | L0022: 1, H0042: 1, | H0318: 1, H0327: 1, | H0328: 1, H0615: 1, | L0483: 1, S0112: 1, | T0042: 1, H0560: 1, | H0625: 1, L0769: 1, | L0800: 1, L0764: 1, | L0804: 1, L0375: 1, |
| Prodicted Enitones  | radoude national I  |                   | •              |           | His-1 to Gly-19,    | Gly-29 to Tyr-35.                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| \\                  | CEO                 | 3                 | NO: Y          | 2186      | 2187                |                                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ado                 | OKE TO              | (01-moll)         |                | 158 - 328 | 3 - 107             | · · · · · · · · · · · · · · · · · · · |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     | Contig IU:          |                   |                | 766307    | 498281              | 107071                                |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | Clone ID            | 7:0v              |                | UOVCD34   | HEDGDS4             | nepuno                                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |

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|  |   |                     |                     |                     |                     |                     |                     |                    |                        |                  | 150240,             | 164160,             | 180105,             | 190900,                                 | 222800,                                 | 246900,             | 602421,             | 602421,             | 602421              |                     |                     |                     |                     |                     |                     |                     |                     |
| · ·  |   |                     |                     |                     |                     |                     | •                   |                    |                        |                  | 7q31.2-             | q31.3               |                     |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| .0805: 1, L0776: 1,<br>.0791: 1, L0792: 1, | <i>A</i> 501: 1, L0666: 1,<br>.0663: 1, H0144: 1, | .0352: 1, H0547: 1, | H0519: 1, H0659: 1, | H0660: 1, S0152: 1, | H0521: 1, H0522: 1, | S0028: 1, L0749: 1, | .0756: 1, L0753: 1, | 0757: 1, H0445: 1, | L0588: 1, L0592: 1 and | S0192: 1.        | H0013: 8, L0731: 8, | L0471: 6, S0003: 6, | H0547: 6, L0439: 6, | L0740: 6, H0046: 5,                     | H0144: 5, H0171: 4,                     | H0494: 4, L0766: 4, | L0775: 4, L0666: 4, | H0521: 4, L0754: 4, | L0588: 4, L0600: 4, | H0624: 3, H0657: 3, | H0575: 3, H0591: 3, | H0551: 3, H0529: 3, | S0126: 3, H0696: 3, | L0745: 3, S0040: 2, | H0295: 2, S0116: 2, | H0638: 2, S0356: 2, | SQ376: 2, SQ278: 2, |
|  |   | - Head              |                     | <u> </u>            | <u></u>             | <u> </u>            |                     | П                  |                        |                  | Glu-29 to Lys-37,   | Lys-110 to Ile-118, | Arg-126 to Cys-135, | Lys-157 to Gly-163, L0740: 6, H0046: 5, | Gin-188 to Trp-201, H0144: 5, H0171: 4, | Glu-269 to Thr-278. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |   |                     |                     |                     |                     |                     |                     | -                  |                        |                  | 2188                |                     |                     |   | -                                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |   |                     |                     |                     |                     |                     |                     | 4, *               |                        |                  | 18 - 947            |                     |                     | •                                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |
|  |   |                     |                     |                     | -                   |                     |                     |                    |                        |                  | 13                  |                     |                     |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | - u-                |
|  | ,   |                     |                     |                     |                     |                     |                     |                    |                        |                  | 533532              | i<br>i<br>i<br>i    |                     |   |   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
|  |   |                     |                     |                     |                     |                     |                     |                    |                        | -, <del></del> - | HETCD42             |                     |                     |   | -                                       |                     |                     | ,                   |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |

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| 0.70001 | H0156: 2, H0056: 2,<br>H0266: 2, H0179: 2, | H0328: 2, H0615: 2, | H0039: 2, H0622: 2, | H0031: 2, H0090: 2, | H0412: 2, H0623: 2, | H0560: 2, H0625: 2, | S0422: 2, L0770: 2, | L0662: 2, L0768: 2, | L0649: 2, L0803: 2, | H0684: 2, S0152: 2, | S0028: 2, S0206: 2, | L0752: 2, L0757: 2, | L0759: 2, S0031: 2, | S0434: 2, L0362: 2, | S0026: 2, S0196: 2, | H0170: 1, H0556: 1, | S0342: 1, S0134: 1, | S0212: 1, H0661: 1, | S0418: 1, S0420: 1, | S0354: 1, S0358: 1, | S0444: 1, H0580: 1, | S0045: 1, S0132: 1, | H0393: 1, L0717: 1, | S0222: 1, H0614: 1, | H0357: 1, H0587: 1, | H0632: 1, H0270: 1, | T0114: 1, H0250: 1, | S0280: 1, S0474: 1, | H0581: 1, H0374: 1, |
|         |  | •                   |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
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|                     | <del>-11 - 1 - 1</del> |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0052: 1, H0232: 1, | H0050: 1, H0024: 1,    | H0051: 1, S0051: 1, | H0355: 1, H0375: 1, | H0594: 1, S0214: 1, | L0483: 1, H0553: 1, | H0644: 1, H0032: 1, | H0212: 1, S0036: 1, | H0038: 1, H0264: 1, | H0413: 1, H0056: 1, | T0042: 1, S0466: 1, | H0509: 1, H0207: 1, | H0641: 1, H0647: 1, | S0344: 1, L0638: 1, | L0637: 1, L0794: 1, | L0804: 1, L0805: 1, | L0656: 1, L0635: 1, | L0528: 1, L0664: 1, | L0665: 1, H0520: 1, | H0519: 1, H0593: 1, | H0435: 1, H0659: 1, | H0670: 1, H0672: 1, | H0651: 1, S0328: 1, | S0330: 1, L0602: 1, | H0518: 1, S0176: 1, | H0555: 1, S0390: 1, | L0750: 1, S0260: 1, | H0595: 1, L0599: 1, | L0608: 1, H0668: 1, |
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|  |   | 106300,<br>108800,<br>120290,<br>120290,<br>120810,<br>142857,<br>142858,<br>150270,<br>177900,<br>177900,<br>217000,<br>222100,<br>235200,<br>235200,<br>256550,  |
|--|---|--|
|  |   | 6p21.3   |
| H0653: 1, S0192: 1,<br>H0543: 1 and : 1. | AR039: 65, AR096:<br>37, AR104: 37, AR089:<br>32, AR053: 27, AR052:<br>25, AR033: 22, AR060:<br>21, AR055: 21, AR061:<br>11 | L0665: 45, L0581: 42,<br>H0509: 32, H0393: 15,<br>H0574: 15, H0510: 15,<br>L0362: 14, L0666: 11,<br>H0658: 10, L0748: 10,<br>H0014: 9, S0410: 8,<br>H0031: 8, H0674: 8,<br>S0438: 8, L0657: 8,<br>H0689: 8, H0039: 7,<br>L0659: 7, H0670: 7,<br>S0044: 7, H0663: 6,<br>H0246: 4, H0046: 4,<br>H0246: 4, H0648: 4,<br>L0749: 4, S0318: 3,<br>L0775: 3, L0664: 3,<br>H0682: 3, L0751: 3,<br>H0506: 3, S0132: 2,<br>H0441: 2, H0632: 2,   |
|  | Ser-57 to Gly-65,<br>Gly-80 to His-86.  | Thr-8 to Thr-19, L0665: 45, L0581: Arg-108 to Ser-115, H0509: 32, H0393: Ser-117 to Arg-128, H0574: 15, H0510: Phe-143 to Tyr-155, L0362: 14, L0666: 1 Leu-171 to Arg-177, H0658: 10, L0748: Asn-182 to Gly-187, H0014: 9, S0410: 8, Gly-195 to Ser-200, H0331: 8, H0674: 8 Arg-232 to Thr-248, S0438: 8, L0657: 8, Pro-287 to Arg-293: H0689: 8, H0039: 7, H0670: 7, S0044: 7, H0663: 6, H0641: 5, S0360: 4, H0648: 4, H0169: 4, H0648: 4, L0749: 4, S0318: 3, L0765: 3, L0765: 3, L0765: 3, L0765: 3, L0765: 3, H0682: 3, L075: 3, H0682: 3, L0751: 3, H0682: 3, L0751: 2, H0641: 2, H0532: 2, H0641: 2, H0532: 2, H0641: 2, H0532: 2, H0641: 2, H0632: 2, H0641: 2, H0641: 2, H0632: 2, H0641: 2, H0632: 2, H0641: 2, H0641: 2, H0642: 2, H0641: 2, |
|  | 2189  | 2190   |
|  | 387 - 115   | 48 - 1214  |
|  | 41  | 15   |
|  | 535854  | 553765   |
|  | HTXKC18   | HL.DRK20   |

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| 600202,             | 601868              | 602280,                                    | 602475 |    |                     |                     |                     |                     |                     |                     |                     | ٠,                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |
|                     |                     |  |        |    |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |
| S0434: 2, L0601: 2, | H0624: 1, L0615: 1, | H0002: 1, 30550: 1,<br>L0717: 1, H0549: 1, | _      | 1, | H0569: 1, H0057: 1, | H0015: 1, H0687: 1, | S0003: 1, S0214: 1, | H0688: 1, H0553: 1, | H0124: 1, H0059: 1, | L0564: 1, L0065: 1, | S0440: 1, L0638: 1, | L0646: 1, L0764: 1, | L0771: 1, L0386: 1, | L0375: 1, L0525: 1, | L0378: 1, L0776: 1, | L0634: 1, L0544: 1, | H0144: 1, S0374: 1, | H0693: 1, S0310: 1, | H0593: 1, S0126: 1, | H0690: 1, H0684: 1, | H0435: 1, H0660: 1, | H0666: 1, S0328: 1, | H0521: 1, S0406: 1, | H0555: 1, S0027: 1, | L0750: 1, L0755: 1, | S0031: 1, S0192: 1, | S0276: 1 and S0196: 1. | L0666: 2, L0394: 1, |
|                     | <del></del>         |  |        |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | Ser-13 to Asp-18.   |
| -                   |                     |  |        |    | _                   |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2191                |
|                     |                     |  |        |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 138 - 290           |
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|                     |                     |  |        |    |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 558474              |
|                     |                     |  |        |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u> </u>            | <del></del>         |                     | _                   |                     |                     |                     |                        | H2MBD33             |

|  | 176300,<br>176300,<br>176300,<br>176300   |   | 100650,<br>100650,<br>142410,<br>142410,<br>142410,<br>160781,<br>181405 |  | 147781,            |
|--|---|---|--|--|--------------------|
|  | 18q12.1   |   | 12q24.2-<br>q24.3  |  | 16p11.2            |
| T0109: 1, H0428: 1,<br>H0264: 1, L0764: 1,<br>L0665: 1 and H0648: 1. | 2, L0757: 2,<br>1, S0007: 1,<br>1, S0250: 1,<br>1, H0328: 1,<br>1, H0551: 1,<br>1 and L0750: 1. | AR089: 5, AR096: 4,<br>AR060: 3, AR104: 3,<br>AR061: 2, AR055: 2,<br>AR033: 1, AR053: 1,<br>AR039: 0<br>H0615: 2, H0346: 1,<br>S0045: 1, H0156: 1,<br>H0659: 1, L0748: 1 and<br>H0444: 1. | H0415: 3   | S3012: 1   | H0521: 4, H0415: 1 |
|  | Arg-13 to Ala-20,<br>Pro-27 to Arg-32,<br>Lys-37 to Glu-62.                                     | Pro-105 to Trp-117. AR089: AR060: AR061: AR033: AR039: H0615 S0045: H0659:  |  | Gly-1 to Ala-9,<br>Pro-42 to Ser-56,<br>Leu-60 to Gly-67,<br>Ala-86 to Asp-95. |                    |
|  | 2192  | 2193  | 2194   | 2195   | 2196               |
|  | 3 - 515   | 623 - 1018  | 99 - 347   | 357 - 641  | 1 - 720            |
| ·  | 17  | 18  | 19   | 8  | 21                 |
|  | 558708  | 562745  | 585385   | 585675   | 588869             |
|  | HSYBX61   | негнсоз   | НОЕМР70  | HSKNZ25  | НDРFК39            |

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| 172471,             | 182381            |                     |                     |                     |                     |                     | 142335,               | 152427,               | 163729,             | 176450,             | 190605,             | 600510,             | 600725              |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                   |                     |                     |                     |                     |                     | 7436                  |                       |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| and H0522: 1.       |                   |                     |                     |                     |                     |                     | L0747: 15, L0742: 12, | .0748: 12, L0752: 12, | .0757: 9, L0731: 8, | .0754: 7, S0144: 6, | L0755: 6, S0356: 5, | S0406: 5, L0740: 5, | H0046: 4, L0764: 4, | H0543: 4, H0250: 3, | H0040: 3, L0761: 3, | L0646: 3, L0774: 3, | L0806: 3, L0751: 3, | L0745: 3, L0753: 3, | L0759: 3, S0212: 2, | H0661: 2, S0360: 2, | S0280: 2, H0014: 2, | H0039: 2, S0036: 2, | H0163: 2, L0768: 2, | L0775: 2, L0776: 2, | L0379: 2, L0783: 2, | L0809: 2, H0702: 2, | S0126: 2, H0689: 2, | H0658: 2, H0672: 2, | L0439: 2, L0750: 2, |
| Glu-55 to Phe-60, a | Asp-93 to Ser-98, | Thr-138 to Tyr-144, | Asn-155 to Phe-163, | Arg-168 to Ser-175, | Gln-205 to Lys-210, | Phe-226 to Thr-233. | Asn-18 to Arg-24,     | Arg-30 to Tyr-35,     | Glu-43 to Asp-51,   |                     | 7,                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |
|                     |                   |                     |                     |                     |                     |                     | 2197                  |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                   |                     |                     |                     |                     |                     | 2-514                 |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                   |                     |                     |                     |                     |                     | 22                    |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                   |                     |                     |                     |                     |                     | 638220                |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                   |                     |                     |                     |                     |                     | HL1AB07               |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|                      |                    |                  |                  |                  |                    |                  |                  |                  |                  |            |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |  |                    |                  | •                |                    |                  |                  |
|                      |                    |                  |                  |                  |                    |                  |                  |                  |                  |            |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |  |                    |                  |                  |                    |                  |                  |
|                      | -                  |                  |                  |                  |                    |                  |                  |                  |                  |            |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |  |                    |                  |                  |                    |                  |                  |
|                      |                    |                  |                  |                  |                    |                  |                  |                  |                  |            |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |  |                    |                  |                  |                    |                  |                  |
|                      |                    |                  | _                |                  |                    | _                |                  | _                |                  | •          |            | •                |                  | •                | •                |                  |                  | •                |                  |                  |             |                  |  | _                  |                  |                  |                    | _                |                  |
| 758: 2,              | 590: 2             | 171: 1,          | 202: 1           | 34: 1,           | 557: 1             | 484: 1           | 305: 1           | 42: 1            | 32: 1,           | , H0586: 1 | , H0486: 1 | 635: 1           | 318: 1           | 597: 1           | 050: 1           | 388: 1,          | 356: 1           | 687: 1           | 03: 1,           | 006: 1           | l, H0313: 1 | 032: 1           | 038: 1                                       | 306: 1             | 130: 1           | 647: 1           | 210: 1,            | 770: 1           | 372: 1           |
| 2, LO                | 2, 1.05            | 2, H0            | 1, TO            | 1, S01           | 1, HO              | 1, H0            | 1, H0            | 1, SQ            | 1, S01           | 1, H0      |            |                  | 1, H0            | 1, H0            | 1, H0            | 1, S0            | 1, HO            | 1, H0            | 1, S00           | 1, T0            | 1, H0       | 1, H0            | 1, HC  | 1, SO              | 1, H0            | 1, HC            | 1, S0.             | 1, L0            | 1, L0            |
| .0756: 2, L.0758: 2, | 0605: 2, L0590: 2, | S0011: 2, H0171: | H0556: 1, T0002: | S0040: 1, S0134: | S0218: 1, H0657: 1 | HQ341: 1, H0484: | 10306: 1, H0305: | H0125: 1, S0442: | S0358: 1, S0132: | H0351: 1   | 10574: 1   | 10013: 1, H0635: | 10575: 1, H0318: | H0052: 1, H0597: | H0041: 1, H0050: | .0163: 1, S0388: | S0051: 1, H0356: | H0266: 1, H0687: | S0312: 1, S0003: | H0252: 1, T0006: | 0142: 1     | ,0055: 1, H0032: | H0169: 1, H0038:                             | 70041: 1, S0306: 1 | S0438: 1, H0130: | H0641: 1, H0647: | S0344: 1, S0210: 1 | .0763: 1, L0770: | .0769: 1, L0372: |
| P                    | 7                  | Š                | Œ                | Š                | Ŋ                  | 正                | <u> </u>         | <u> </u>         | S)               | 王          | <u> </u>   | <u> </u>         | <u> </u>         | <u> </u>         | <u> </u>         |                  | S                | <u>II.</u>       | S                | <u> </u>         | <u></u>     | <u></u>          | <u> </u>                                     | H                  | S                | <u>:11</u>       | S                  | <u> </u>         | _                |
|                      |                    |                  |                  |                  |                    |                  |                  |                  |                  |            |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |  |                    |                  |                  |                    |                  | į                |
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|                      |                    |                  |                  |                  |                    |                  |                  | _                |                  |            |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |  |                    |                  | •                |                    |                  |                  |
| ┢                    |                    |                  | _                |                  |                    |                  |                  |                  |                  | ٠.         |            |                  |                  | -                |                  |                  |                  |                  |                  |                  | *           | -                |  |                    |                  |                  |                    |                  |                  |
|                      |                    |                  |                  |                  |                    |                  |                  |                  |                  |            |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |  |                    |                  |                  |                    |                  |                  |
|                      |                    |                  |                  |                  |                    |                  |                  |                  |                  |            | ,          |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |  |                    |                  |                  |                    |                  |                  |
| $\vdash$             | _                  |                  |                  |                  |                    |                  |                  |                  |                  |            |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |  |                    |                  |                  |                    |                  |                  |
|                      |                    |                  |                  |                  |                    |                  |                  |                  |                  | •          |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |  |                    |                  |                  |                    |                  |                  |
|                      |                    |                  |                  |                  |                    |                  |                  |                  |                  |            |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  | <u>.                                    </u> |                    |                  |                  |                    |                  |                  |
|                      |                    |                  |                  |                  |                    |                  |                  |                  |                  |            |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |  |                    |                  |                  |                    |                  |                  |
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| L0642: 1, L0645: 1,<br>L0771: 1, L0648: 1,<br>L0662: 1, L0364: 1,<br>L0375: 1, L0655: 1,<br>L0807: 1, L0657: 1,<br>L0659: 1, L0532: 1,<br>L0666: 1, L0664: 1,<br>L0665: 1, H0144: 1,<br>H0701: 1, H0711: 1,<br>S0380: 1, H0521: 1,<br>S0380: 1, L0771: 1,<br>H0445: 1, L0599: 1,<br>S0276: 1, H0423: 1 and<br>H0506: 1. | L0744: 11, S0007: 10, 17 H0617: 10, L0747: 9, H0673: 8, H0597: 6, L0748: 6, L0754: 6, L0731: 6, L0622: 5, L0542: 5, L0755: 5, H0306: 4, H0402: 4, H0150: 4, H0188: 4, L0775: 4, L0751: 4, H0170: 3, H0255: 3, S0278: 3, T0006: 3, H0674: 3, L0774: 3, H0674: 3, L0775: 2, |
|---|---|
| L0642: 1<br>L0771: 1<br>L0662: 1<br>L0807: 1<br>L0659: 1<br>L0666: 1<br>R0701: 1<br>S0380: 1<br>S0404: 1<br>H0445: 1<br>H0445: 1  | L074 H0617 H0673 L0809: L0731: L0748: H0150 H0176 S0278: H0674 H0674 H0674  |
|   | 2198  |
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|                     |                     |                     |                  |                     |                     |                     |                      |                     |                     |                     |                     |             |                    |                  |                  |                    |                    |                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |
|                     |                     |                     |                  |                     |                     |                     |                      |                     |                     |                     |                     |             |                    |                  |                  |                    |                    | _                |                    |                  |                    |                  |                  |                  | •                |                  |                  | _                |           |
|                     |                     |                     | •                |                     |                     |                     |                      |                     |                     |                     |                     |             |                    |                  |                  |                    |                    |                  |                    |                  | •                  |                  |                  |                  |                  |                  |                  |                  |           |
| -                   |                     |                     |                  |                     |                     |                     |                      |                     |                     |                     |                     |             |                    |                  | -                |                    |                    |                  |                    |                  |                    |                  |                  | <u>.</u>         |                  |                  |                  |                  |           |
| 2,                  | .,                  | 3: 2,               | 2,               | 3: 2,               | 2. 2,               | 2,                  | 2,                   | 2,                  | 2, 2,               | F. 2,               | 2,                  | 7: 2,       | <br>2,             | . <u>.</u> .     | : <u>1</u> ,     | 3: 1,              | 9: 1,              | : 1,             | ): 1,              | I: 1,            | 3: 1,              | l: 1,            | 8: 1,            | I: 1,            | 7: 1,            | 6: 1,            | 9: 1,            | 0: 1,            | 4: 1,     |
| L0785: 2, H0661: 2, | S0376: 2, S0360: 2, | H0637: 2, H0333: 2, | H0486: 2, H0309: | H0545: 2, H0123: 2, | H0594: 2, H0032: 2, | H0169: 2, S0142: 2, | .0767: 2, L.0776: 2, | .0655: 2, L0529: 2, | .0530: 2, L0666: 2, | .0663: 2, L0664: 2, | H0682: 2, L0750: 2, | L0757: 2,   | .0759: 2, L0588: 2 | .0361: 2, S0114: | r0049: 1, S0134: | H0254: 1, S0358: 1 | H0580: 1, H0339: 1 | S0046: 1, S0140: | S6026: 1, S0300: 1 | S6022: 1, H0441: | H0455: 1, H0643: 1 | F0060: 1, L0021: | H0042: 1, H0618: | H0253: 1, N0011: | S0049: 1, H0327: | H0530: 1, H0546: | H0086: 1, H0009: | H0081: 1, H0050: | H0024:    |
| 35: 2,              | 6: 2,               | 37: 2,              | 86: 2,           | 45: 2,              | 94: 2,              | 69: 2,              | 57:2,                | 55: 2,              | 30: 2,              | 53: 2,              | 82: 2,              | .0753: 2, I | 59: 2,             | 61:2,            | 49: 1,           | 54: 1,             | 80: 1,             | 46: 1,           | 26: 1,             | 22: 1,           | 55: 1,             | 60: 1,           | 42: 1,           | 53: 1,           | 49: 1.           | 30: 1,           | 86: 1,           | 81: 1,           | H0620: 1, |
| 101                 | S037                | )<br>()<br>()       | H04              | H05                 | H05                 | H01                 | <u>1</u> 2           | 706                 | 105                 | 100                 | H06                 | 102         | <u>100</u>         | <u>103</u>       | <u>T</u> 00      | H02                | H05                | 800              | S60.               | S60.             | <u>H</u>           | 700              | 0 <u>H</u>       | H02              | 200              | HOS              | 90 <u>H</u>      | H00              | HOG       |
| <u> </u>            |                     |                     |                  |                     |                     |                     |                      |                     |                     |                     |                     |             |                    |                  |                  |                    |                    |                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |
|                     |                     |                     |                  |                     |                     |                     |                      |                     | •                   |                     |                     |             |                    |                  |                  |                    |                    |                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |
|                     |                     |                     |                  |                     |                     |                     |                      | •                   |                     |                     |                     |             |                    | •                |                  |                    |                    |                  |                    |                  |                    |                  | •                |                  |                  |                  |                  |                  |           |
| -                   |                     |                     | _                |                     |                     |                     |                      | <u> </u>            |                     |                     |                     |             |                    |                  |                  | -                  |                    |                  |                    |                  | _                  |                  |                  |                  |                  |                  |                  |                  |           |
| _                   |                     |                     | _                | _                   |                     |                     |                      | _                   |                     |                     |                     |             |                    |                  |                  |                    |                    |                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |
|                     |                     |                     | •                |                     |                     |                     |                      |                     |                     |                     |                     |             |                    |                  |                  |                    |                    |                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |
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|                     |                     |                     |                  |                     |                     |                     |                      |                     |                     |                     |                     |             |                    |                  |                  |                    |                    |                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |
|                     |                     |                     |                  |                     |                     |                     | -                    |                     |                     |                     |                     |             |                    |                  |                  |                    |                    |                  |                    |                  |                    |                  | •                |                  |                  |                  |                  |                  |           |
|                     |                     |                     |                  |                     |                     |                     |                      |                     |                     |                     |                     |             |                    |                  |                  |                    |                    |                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |
| -                   |                     |                     |                  |                     |                     |                     |                      |                     |                     |                     |                     |             | -                  |                  |                  |                    | <del></del>        |                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |
|                     |                     |                     |                  |                     |                     |                     |                      |                     |                     |                     |                     |             |                    |                  |                  |                    |                    |                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |
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|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------|-------------|------------------|------------------|------------------|------------------|-----------|-------------|-------------|-----------|-------------|--------------------|--------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|
| ·                |                  |                  |                  |                  |                  |                  |                  |                  |        | •           |                  |                  |                  |                  |           |             |             |           |             |                    |        |                  |                  |                  |                  |                  |                  |                   |                   |
|                  |                  |                  |                  |                  | •                |                  |                  |                  |        |             |                  |                  |                  |                  |           |             |             |           |             |                    |        |                  |                  |                  |                  |                  |                  |                   |                   |
| -                |                  |                  |                  |                  |                  |                  |                  |                  |        |             |                  |                  |                  |                  |           |             |             |           |             |                    |        |                  |                  |                  |                  |                  |                  |                   |                   |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |        |             |                  |                  | •                |                  |           |             |             |           |             |                    |        |                  |                  |                  |                  | •                |                  |                   |                   |
| _                |                  |                  |                  |                  |                  |                  |                  |                  |        |             |                  |                  | <u>-</u>         |                  |           |             |             |           |             |                    |        |                  |                  | -                |                  |                  |                  |                   |                   |
| ): 1,<br>        | : 1,             | : 1 <b>,</b>     | : <b>1</b> ,     | 3: 1 <b>,</b>    | l: 1,            | 3: 1,            | 3: 1,            | . 1;<br>2: 1;    | ); 1,  | : 1,        | . <del>.</del>   | . <del>.</del> . | 1, 1,            | : 1 <b>,</b>     | . T       | ; T         | 1;          | 1,        | <u></u>     | . I,               | . T    | : <b>1</b> ;     | 9: 1,            | . 1,             | ): 1,            | . 1,             | <br>             | ; T               | : 1,              |
| H0057: 1, H0373: | S0051: 1, H0071: | H0687: 1, S0003: | S0214: 1, H0417: | H0031: 1, H0553: | H0111: 1, H0181: | H0606: 1, H0038: | H0616: 1, H0063: | H0087: 1, H0412: | T006   | L0564:      | S0440: 1, S0144: | 1, S0208:        | .0598: 1, L0520: | .0763: 1, L0371: | T0997:    | L0765:      | L0662:      | 1, L0376: | T0806:      | L0658: 1, L0659: 1 | L0783  | .0788: 1, S0053: | H0691: 1, H0519: | S0126: 1, H0689: | H0660: 1, S0330: | H0696: 1, S0404: | H0576: 1, S3014: | \$0206: 1, L0742: | .0743: 1, L.0749: |
| 57: 1,           | 11:1,1           | 37: 1,           | 4: 1, ]          | 31: 1,           | 11: 1,           | 36: 1,           | 16: 1,           | 87: 1,           | 59: 1, | F0004: 1, ] | 10:1,            | 4:1,             | <b>38: 1,</b>    | 33: 1,           | .0770: 1, | .0764: 1, I | .0771: 1, ] | 75: 1,    | .0378: 1, ] | 58: 1,             | 18: 1, | 38: 1,           | 91: 1,           | 6. 1,            | 50: 1,           | 96: 1,           | 76: 1,           | 6: 1,             | 13: 1,            |
| 100<br>H         | S005             | H068             | S021             | 00<br>H          | H01.             | )90H             | H06              | 00H              | H00;   | <u>8</u>    | S044             | S0344: 1         | 105              | 1707             | 107       | 107         | 107         | L0375: 1  | 1.037       | 7007               | 105    | 107              | H06              | S012             | H06              | 90H              | H05              | S02(              | 1007              |
| ,                |                  |                  |                  |                  | •                |                  |                  |                  |        |             |                  |                  |                  |                  |           |             |             |           |             |                    |        | ٠                |                  |                  |                  |                  |                  |                   |                   |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |        |             |                  |                  |                  |                  |           |             |             |           |             |                    |        |                  |                  |                  |                  |                  |                  |                   |                   |
|                  |                  |                  |                  | ٠                |                  |                  |                  |                  |        |             |                  |                  |                  |                  |           |             |             |           |             |                    |        |                  |                  |                  |                  |                  |                  |                   |                   |
|                  |                  |                  |                  |                  | -                | -                |                  |                  |        |             |                  |                  |                  |                  |           | -           |             |           |             |                    |        |                  | _                |                  |                  |                  |                  |                   |                   |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |        |             |                  |                  |                  |                  |           |             |             |           |             |                    | •      |                  |                  |                  |                  |                  |                  |                   |                   |
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|                  |                  |                  |                  |                  |                  |                  |                  |                  |        |             |                  |                  |                  |                  |           |             |             |           |             |                    |        |                  |                  | _                |                  |                  |                  |                   |                   |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |        |             |                  |                  |                  |                  |           |             |             |           |             |                    |        |                  |                  |                  |                  |                  |                  |                   | ,                 |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |        |             |                  |                  |                  |                  | J.        |             |             |           |             |                    |        | •                |                  |                  |                  |                  |                  |                   |                   |
|                  |                  |                  |                  |                  | ٠                |                  |                  |                  |        |             |                  |                  |                  |                  |           |             |             |           |             |                    |        |                  |                  |                  |                  |                  |                  |                   | ,                 |
|                  |                  |                  |                  |                  |                  | _                |                  |                  |        | ***         |                  |                  |                  |                  |           |             |             |           |             |                    |        |                  |                  |                  |                  |                  | <u> </u>         | <del>,</del>      |                   |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |        |             |                  |                  |                  |                  |           |             |             |           |             |                    |        |                  |                  |                  |                  |                  |                  |                   |                   |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |        |             |                  |                  |                  |                  |           |             |             |           |             |                    |        |                  |                  |                  |                  |                  |                  |                   |                   |

|   |  |   |                   |         |         |         | _       |         |         |                   |         | _       |
|---|--|---|-------------------|---------|---------|---------|---------|---------|---------|-------------------|---------|---------|
|   | 120260,<br>120950,<br>120960,<br>138140,<br>178300,<br>178300,<br>246450,<br>600101,<br>600650,<br>600650,<br>600722,                    |   |                   | 141750, | 141800, | 141800, | 141800, | 141800, | 141850, | 141850,           | 141850, | 141850, |
|   | 1 p33-p32  |   | 2                 | 16p13.3 |         |         |         | -       |         | · · · · · · · · · |         |         |
| L0752: 1, H0445: 1,<br>L0589: 1, L0592: 1,<br>L0608: 1, H0422: 1,<br>H0008: 1 and H0293: 1. | AR089: 7, AR060: 6,<br>AR096: 5, AR104: 3,<br>AR055: 3, AR061: 2<br>L0746: 2, H0592: 1,<br>H0087: 1, L4501: 1,<br>L0665: 1 and L0758: 1. | T0115: 1, L0662: 1,<br>L0766: 1, L0659: 1,<br>L0809: 1, L0748: 1 and<br>H0444: 1. |                   |         |         |         |         |         |         | •                 |         |         |
|   | lle-1 to Thr-10,<br>Pro-66 to Gly-77,<br>Asp-85 to Gly-116.  |   | Gly-13 to Val-36. |         |         |         |         |         |         |                   |         |         |
|   | 2199   | 2200  | 2201              | 2202    | -       |         |         |         |         |                   | •       | •       |
|   | 3 - 515  | 2 - 211   | 402 - 590         | 2 - 721 |         |         |         | •       |         |                   |         |         |
| ·   | 42   | 25  | 26                | . 22    |         | ,       |         |         |         |                   |         |         |
|   | 704405   | 705692  | 711500            | 732342  |         |         |         |         |         |                   |         | •       |
|   | HTSGÜ37  | H2LAN34   | HPMBZ40           | HLYEP52 |         |         |         |         | ,       |                   |         |         |

| 141850,<br>156850,<br>186580,<br>191092,<br>600140,<br>600273,<br>601313, |   | 106300,<br>108800,<br>120290,<br>120290,<br>120810,<br>120820,<br>142857,<br>142858,<br>150270,<br>167250,<br>177900,<br>179450,<br>201910, |
|---|---|---|
| ·   |   | 6p21.3  |
|   | AR096: 3, AR053: 2,<br>AR060: 2, AR089: 2,<br>AR033: 1, AR061: 1,<br>AR055: 1, AR104: 0,<br>AR039: 0<br>L0766: 2, S0354: 1,<br>H0135: 1 and H0040: 1. |   |
|   | ·   | Arg-6 to Leu-12, Tyr-18 to Asp-25.  |
|   | 2203  | 2204  |
|   | 329 - 433   | 113 - 391   |
| ·   | 28  | 53  |
|   | 745343  | 746416  |
| ·   | HTTEC47   | НОРМО90   |

| 222100,<br>233100,<br>235200,<br>248611,<br>256550,<br>600202,<br>600261,<br>601868,<br>602280, | 113721,<br>247200,<br>600059,<br>601545 | 106165,<br>110100,<br>117700,<br>117700,<br>150210,<br>169600,<br>180380,<br>180380,<br>203500,<br>276902,<br>601199, |
|---|---|---|
|   | 17p13.3                                 | 3q23  |
|   | ·                                       | L0740: 2, S0356: 1,<br>H0040: 1, H0616: 1 and<br>H0560: 1.  |
|   |   |   |
|   | 2205                                    | 2206  |
|   | 99 - 164                                | 388 - 609   |
|   | 30                                      | 31  |
|   | 762806                                  | 785328  |
|   | HCHND34                                 | HAMGI86   |

|        |                   |                     | _                   |                     |                     |                   |                    |                    |                     | <del>-</del> -      |                     |                  |            |             |                      |                    |                  |                  |                  |                  | -                |           |             | _         |          |           |                    |                 |
|--------|-------------------|---------------------|---------------------|---------------------|---------------------|-------------------|--------------------|--------------------|---------------------|---------------------|---------------------|------------------|------------|-------------|----------------------|--------------------|------------------|------------------|------------------|------------------|------------------|-----------|-------------|-----------|----------|-----------|--------------------|-----------------|
|        |                   |                     |                     |                     |                     |                   |                    |                    |                     |                     |                     |                  | :          |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
| 199,   | 601199,<br>601682 |                     |                     |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  | ,                |           |             |           |          |           |                    |                 |
| 601199 | 601199<br>601682  |                     |                     | •                   |                     |                   |                    |                    |                     |                     |                     |                  | -:-        |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        |                   |                     |                     |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        |                   |                     |                     |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        | •                 |                     |                     |                     |                     |                   |                    |                    | -                   |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           | <del>.</del> ,     | -               |
|        |                   | . 6,                | 4,                  | 4,                  | ຕົ                  | 33                | 3,                 | 3,                 | 4                   | ر.<br>د             | 4                   | 4                | 2,         | 2,          | 2,                   | رب<br>م            | 1,               | l,               | 1,               | L,               | 1,               | ۲,        | 1,          | 7,        | 1,       | 1,        | 1,                 | 1,              |
|        |                   | L0766: 7, L0794: 6, | .0758: 6, L0665: 4, | .0439: 4, L0779: 4, | H0590: 3, H0328: 3, | 0598: 3, L0763: 3 | .0666: 3, H0648: 3 | .0754: 3, L0362: 3 | H0506: 3, H0657: 2, | H0661: 2, S0438: 2, | .0646: 2, L0803: 2, | 306:             | L0438: 3   | .0740: 2,   | .0747: 2, L.0756: 2, | .0731: 2, S0434: 2 | .0589: 2, H0713: | 583:             | .699             | 222:             | 021:             | 1, H0036: | , L0163:    | 1, H0179: | 092:     | l, H0163: | H0038: 1, H0100: 1 | 422:            |
|        |                   | 7, L                | Š, Š                | 4, LO               | 3, HC               | 3,10              | 3, H0              | 3,12               | 3, HC               | 2, S0               | 2,10                | .0375: 2, L0806: | 2,10       | 2, 10       | 2, 1.0               | 2, 50,             | 2, HO            | S0114: 1, H0583: | H0255: 1, H0669: | 10663: 1, S0222: | H0497: 1, L0021: | l, H0     | 1,10        | 1, HC     |          |           | 1, HC              | S0440: 1, S0422 |
|        |                   | 766:                | ,28: (              | 139: 4              | 390:                | :86               | :99                | 54:                | :909                | 561:                | 3.5                 | 75: 2            | 0809: 2, 1 | .0744: 2, 1 | 747: 2               | 731: 2             | 3685             | 14:              | 255:             | 563:             | 197:             | .0022:    | 10052:      | H0239:    | H0615:   | H0553: 1  | 338:               | 64              |
|        |                   | 2                   | 5                   | <u>2</u>            | H                   | <u>5</u>          | 9                  | 5                  | HO                  | )H                  | 2                   | <u> 103</u>      | <u> </u>   | 5           | 107                  | 10                 | 5                | S01              | HO<br>HO         | )<br>H           | Й<br>Н           | 3         | <u>H</u>    | H0.       | <u>Ĕ</u> | <u>H</u>  | )OH                | S04             |
|        |                   |                     | <del>(</del> 2      |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        |                   | rp-9,               | Leu-                |                     |                     |                   | *                  |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        |                   | to T                | 4 to                |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        |                   | Tyr-1 to Trp-9,     | Thr-44 to Leu-49.   |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
| ┢      |                   |                     | <u> </u>            |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        |                   | 2207                |                     |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  | ,                |                  |                  |           |             |           |          |           |                    |                 |
|        |                   | 691                 |                     |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    | •                |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        |                   | 326 - 691           |                     |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    | ·               |
| _      |                   | _                   |                     |                     |                     |                   |                    |                    |                     |                     | <del></del>         |                  |            |             |                      |                    | _                |                  |                  |                  |                  |           |             | _         |          |           |                    | $\dashv$        |
|        |                   | 32                  |                     |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        |                   |                     |                     |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             | ,                    |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        |                   | 794213              |                     | •                   |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        |                   | 5/                  |                     |                     |                     |                   | ٠                  |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           | •                  |                 |
|        |                   | <i>L</i> 9          |                     |                     |                     |                   |                    |                    |                     |                     |                     | _                | •          |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        |                   | HLWCN67             |                     |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
|        |                   | H                   |                     |                     |                     |                   |                    |                    |                     |                     |                     |                  |            |             |                      |                    | ٠                |                  |                  |                  |                  |           |             |           |          |           |                    |                 |
| L      |                   | Ь                   |                     |                     |                     | •                 |                    |                    |                     |                     |                     |                  |            |             |                      |                    |                  |                  |                  |                  |                  |           | <del></del> |           |          |           |                    |                 |

|  | 12                              |   |
|--|---------------------------------|---|
| S0426: 1, UNKWN: 1, L5575: 1, L0648: 1, L0764: 1, L0652: 1, L0651: 1, L0653: 1, L0657: 1, L0657: 1, L0661: 1, L0657: 1, L0526: 1, L0793: 1, L0768: 1, R0664: 1, S0374: 1, R0682: 1, R0658: 1, S0328: 1, R0539: 1, S0328: 1, L0750: 1, L0752: 1, L0759: 1, L0752: 1, L0759: | H0415: 3 and H0414:<br>H0124: 1 | AR052: 3, AR089: 2,<br>AR039: 2, AR055: 2,<br>AR033: 2, AR053: 2,<br>AR060: 2, AR096: 1,<br>AR061: 1, AR104: 1<br>H0651: 8, L0744: 7,<br>L0748: 6, H0620: 4,<br>S0360: 3, S0142: 3,<br>L0755: 3, H0638: 2,<br>H0052: 2, H0123: 2,   |
|  |                                 | Gln-35 to Ser-43, AR052: 3, AR089: Thr-52 to Cys-57, AR039: 2, AR055: Glu-70 to Lys-79, AR033: 2, AR053: Trp-121 to Lys-126, AR060: 2, AR056: Ser-152 to Ser-162, AR061: 1, AR104: Ser-183 to Phe-191, H0651: 8, L0744: 7 Val-206 to Thr-213, L0748: 6, H0620: 4, Ile-217 to Asn-222, S0360: 3, S0142: 3, Arg-237 to Lys-246, L0755: 3, H0638: 2, Thr-279 to Cys-285, H0052: 2, H0123: 2, |
|  | 2208                            | 2210  |
|  | 866 - 3                         | 2 - 1924  |
| ·  | 33                              | 35  |
|  | 806819                          | 828176  |
| ·  | HOFAC09<br>HRDEL61              | HDPOR60   |

|  |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | <del></del> ,       |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|--|---|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| His-336 to Leu-341, H0083: 2, H0328: 2,<br>Pro-380 to Phe-387, H0615: 2, H0039: 2, | Gln-405 to Asp-410, H0424: 2, H0163: 2, | Thr-581 to Asp-595. H0040: 2, H0059: 2, | L0659: 2, L0519: 2, | L0438: 2, S0378: 2, | S3012: 2, S3014: 2, | L0743: 2, L0750: 2, | L0758: 2, L0589: 2, | H0656: 1, H0662: 1, | S0420: 1, S0358: 1, | S0408: 1, H0637: 1, | S0222: 1, H0574: 1, | S0280: 1, L0021: 1, | H0544: 1, H0546: 1, | H0545: 1, H0081: 1, | H0012: 1, H0266: 1, | H0188: 1, H0687: 1, | H0288: 1, H0292: 1, | H0252: 1, H0673: 1, | H0100: 1, H0641: 1, | S0144: 1, S0002: 1, | L0761: 1, L0643: 1, | L0662: 1, L0650: 1, | L0774: 1, L0375: 1, | L0805: 1, L0776: 1, | L0783: 1, L0793: 1, | L0665: 1, S0053: 1, | H0520: 1, H0658: 1, | H0672: 1, H0522: 1, |
| His-336<br>Pro-380   | Gln-405                                 | Thr-581                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |
| ·  |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |   |   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |

|  |   | 164731,<br>172400,<br>172400,<br>180901,<br>180901,<br>221770,<br>248600,<br>600918, | 148370,<br>238600,<br>238600,<br>238600,<br>238600,<br>600143,<br>601385,  |
|--|---|--|--|
|  | ·   | 19q13.1  | 8p22-p21.3   |
| S0406: 1, H0436: 1,<br>S0037: 1, L0747: 1,<br>L0749: 1, L0779: 1,<br>L0731: 1, S0031: 1 and<br>S0434: 1. | L0748: 3, H0486: 2,<br>L0599: 2, S0212: 1,<br>S0358: 1, H0596: 1,<br>H0032: 1, H0212: 1,<br>S0002: 1, L0769: 1,<br>L0775: 1, L0527: 1,<br>L0519: 1, S0122: 1,<br>L054: 1 and L0750: 1.                        | S0250: 2, H0435: 2,<br>S0152: 1 and L0745: 1.  | L0741: 3, H0069: 1,<br>S0250: 1, H0032: 1,<br>H0212: 1, L0774: 1,<br>H0522: 1 and L0756: 1.  |
|  | Pro-117 to Lys-134, L0748: 3, H0486: Glin-136 to Trp-143. L0599: 2, S0212: 1, S0358: 1, H0596: 1 H0032: 1, H0212: 1, S0002: 1, L0769: 1, L0775: 1, L0577: 1, L0519: 1, L0519: 1, S0122: 1, L0754: 1 and L0756 | Pro-1 to Pro-9,<br>Arg-81 to Glu-87,<br>Gln-114 to Glu-119.                          | Gly-17 to Leu-40,<br>Ala-47 to Phe-63,<br>Glu-66 to Val-71,<br>Ile-75 to His-92,<br>Glu-112 to Asn-119,<br>Asp-122 to Arg-135,<br>Asn-140 to Phe-152,<br>Asn-160 to Arg-166. |
|  | 2211  | 2212   | 2213   |
|  | 3 - 458   | 1 - 417  | 295 - 879  |
|  | 36  | 37   | 38   |
|  | 828574  | 828862   | 828872   |
| ·  | HPRTS71   | нонві90  | HOHAL47  |

|                       |                     |                     |                    |                      |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |
|-----------------------|---------------------|---------------------|--------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|
| AR061: 13, AR089: 5,  | AR096: 5, AR033: 4, | AR053: 3, AR055: 3, | AR104: 3, AR039: 2 | H0617: 11, L0748: 5, | L0731: 4, H0181: 3, | L0775: 3, H0670: 3, | L0749: 3, H0656: 2, | H0550: 2, H0083: 2, | H0087: 2, H0658: 2, | H0539: 2, L0747: 2, | L0750: 2, H0341: 1, | H0661: 1, H0402: 1, | S0418: 1, S0360: 1, | S0045: 1, H0393: 1, | H0587: 1, H0333: 1, | H0544: 1, H0009: 1, | H0510: 1, H0688: 1, | H0644: 1, H0606: 1, | H0708: 1, S0366: 1, | H0131: 1, L0770: 1, | L0540: 1, L0783: 1, | L0809: 1, L0789: 1, | L0666: 1, L0665: 1, | H0689: 1, H0682: 1, | H0672: 1, L0743: 1, | L0779: 1, L0759: 1, | S0434: 1 and S0460: 1. | L0766: 7, L0731: 5, |
| 2214 Phe-4 to Gln-10. |                     |                     |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   | •                   |                     |                     |                     |                     |                     |                        | Arg-13 to Trp-31,   |
| 2214                  |                     |                     |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2215                |
| 2 - 694               |                     |                     |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2 - 418             |
| 39                    |                     |                     |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 40                  |
| 829298                |                     |                     |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 829958              |
| HYASE58               |                     |                     |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HKAAH95             |

| Val-61 to Asn-67, H0542; J. H0494; 3, Luy-87 to Arg-109, L0356; 3, L0757; 3, Luy-87 to Arg-109, L0752; 3, L0757; 3, Luy-97 to Arg-139, L0582; 3, H0656; 2, L0757; 2, H0041; 2, 80382; 2, H0041; 2, 80382; 3, H0069; 2, L0767; 2, L0712; 2, L |                 |          |        |          |       |           |       |               |        |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       |        |     |
|--|-----------------|----------|--------|----------|-------|-----------|-------|---------------|--------|-------|--------|----------|--------|-------|-------------|--------|-----------|--------|--------------|--------|--------|--------|--------|----------|--------|----------|-------|--------|-----|
| ~ <u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>  |                 |          |        |          |       |           |       |               |        |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       |        |     |
| ~ <u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>  |                 |          |        |          |       |           |       |               |        |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       |        |     |
| ~ <u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>  |                 | _        |        |          |       | •         |       |               |        |       |        |          |        |       | _           |        |           |        |              |        |        |        |        | <u> </u> |        |          |       |        | _   |
| ~ <u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>  |                 |          |        |          |       |           |       |               |        |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       |        |     |
| ~ <u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>  |                 |          |        |          |       |           |       |               |        |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       |        |     |
| ~ <u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>  | •               |          |        |          |       |           |       |               |        | _     | •      | •        |        |       |             | •      |           |        | •            | •      | •      |        |        |          |        |          |       | _      | ,   |
| ~ <u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>  | 194: 3<br>50: 3 | 57: 3    | 86: 2  | 57:2     | 58: 2 | 46: 2,    | 69: 2 | 74: 2         | 26:2   | 90: 2 | 585: 1 | 562: 1   | 76: 1  | 80: 1 | 09: 1       | 98: 1  | 82: 1,    | 14:1   | <b>H3:</b> 1 | 525: 1 | 50:1   | 533: 1 | 4:1    | 62: 1    | 06: 1  | 17:1     | 83: 1 | 19: 1  |     |
| ~ <u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>  | , H04           | ,<br>10, | , H06  | , H06    | , S03 | , S00     | , H01 | , L07         | , S01  | ,1.05 | , H00  | , H06    | , S03  | , H05 | , T01       | , H00  |           | , H00  | , H02        | , H06  | , S01  | , H06  | ,107   |          |        |          | , L03 | , LOS  | ĎĦ. |
| ~ <u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>  | 542: 5          | 52:3     | 588: 3 | )49: 2   | 341:2 | 08:2      | 171:2 | 63:2          | 519: 2 | 27: 2 | 423: 2 | 550: 1   | 504: 1 | 60: 1 | 431: 1      | 369: 1 | 148: 1    | 023: 1 | 517: 1       | 129: 1 | 132: 1 | 130: 1 | 520: 1 | 548: 1   | 775: 1 | 379: 1   | 540:1 | 309: 1 | 202 |
| Val-61 to Asn-67,  Lys-87 to Arg-92,  Leu-97 to Asp-109  Ser-129 to Asp-135  | ,<br>ОН<br>1    |          | _      | <u> </u> | HOH   | <u>10</u> | 707   | 9             | HO     | 200   | ΉÓ     | <u>Ĕ</u> | Ή      | S03   | Ä<br>H<br>M | ŎĦ.    | <u>10</u> | HO     | ŎH.          | H      | 9      | E<br>H | 9      | <u> </u> | 103    | <u>0</u> | 100   | 9      | Ξ   |
| Val-Ot to Asr<br>Lys-87 to Asr<br>Leu-97 to Asr<br>Ser-129 to As   | 1-67,<br>1-92   | -109     | p-139  |          |       |           |       |               |        |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       |        |     |
| Val-61 to  Lys-87 t  Leu-97 t  Ser-129   | o Asn<br>o Are  | o Asi    | to As  |          |       |           |       |               |        |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       |        |     |
| N Le A   | 1-61 ts-87 t    | u-97 t   | r-129  |          |       |           |       | •             |        |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       | ٠      |     |
|  | Va<br>I.v       | 2 2      | Se     |          |       |           | •     |               |        |       |        |          |        |       |             |        |           |        |              | _      |        |        |        |          |        |          |       | •      | _   |
|  |                 |          | :      | ·        |       |           |       |               | . •    |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       | ;      |     |
|  |                 |          |        |          |       |           | -     |               |        |       | -,     |          |        |       |             |        |           |        |              | _      |        |        |        |          |        |          |       | :      | _   |
|  |                 |          |        |          |       |           |       |               |        |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       | •      |     |
|  | w.···.          |          |        |          |       |           |       | <del></del> - |        |       |        |          |        |       |             | ·      |           |        |              |        |        |        |        |          |        |          |       | ;      |     |
|  | <del></del>     |          |        |          |       |           |       |               |        |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       |        |     |
|  |                 |          |        |          |       |           | •     |               |        |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       |        |     |
|  |                 |          | •      |          |       |           |       |               |        |       |        |          |        |       |             |        |           |        |              |        |        |        |        |          |        |          |       |        |     |
|  |                 |          |        |          |       |           |       |               |        |       |        |          |        |       |             |        |           | •      |              |        | •      |        |        |          |        | -        |       |        | _   |
|  |                 |          |        |          |       |           |       |               |        |       |        |          |        |       |             |        |           | •      |              |        |        |        |        |          |        |          |       |        |     |
|  |                 |          |        |          |       |           |       |               |        |       |        |          |        |       |             |        |           |        |              |        | ·      |        |        |          |        |          |       | •      |     |

|  | ·   |                       | _                 |                   |                   |                     |                     |                     |                     |  |                       |                                      |                              | ******                               |                       |                       |                        |           |                             |                     |         |         |         |
|--|---|-----------------------|-------------------|-------------------|-------------------|---------------------|---------------------|---------------------|---------------------|--|-----------------------|--------------------------------------|------------------------------|--------------------------------------|-----------------------|-----------------------|------------------------|-----------|-----------------------------|---------------------|---------|---------|---------|
|  |   | 180297,<br>230450.    | 263200,           | 601690            |                   |                     |                     |                     |                     |  |                       | •                                    |                              |                                      |                       |                       |                        |           | 118210,                     | 120550,             | 120570, | 120575, | 121800, |
|  |   | 6p12                  |                   |                   |                   |                     |                     |                     |                     |  |                       |                                      |                              | •                                    |                       |                       |                        |           | p36                         |                     |         |         |         |
| H0658: 1, H0666: 1,<br>S0328: 1, S0380: 1,<br>S0032: 1, L0779: 1,<br>L0758: 1, L0759: 1 and<br>H0445: 1. |   | H0581: 1 and H0521: 6 |                   | ,                 |                   |                     |                     | H0124: 8, H0550: 5, | H0428: 3, H0586: 2, | .0575: 2, H0555: 2,                    | H0294: 1, S0282: 1,   | .0427: 1, H0196: 1,                  | .0052: 1, H0194: 1,          | 0086: 1, H0123: 1,                   | H0509: 1, H0684: 1,   | L0748: 1, L0747: 1,   | .0756: 1, S0192: 1 and | H0506: 1. | S0358: 1, S0376: 1 and 1p36 | H0413: 1.           |         |         |         |
| E S S I E  | Ala-96 to Lys-111,<br>Cys-117 to Cys-128. |                       | Glu-60 to Leu-68, | His-75 to Glu-82, | Arg-92 to Ser-99, | Gly-105 to Gln-110, | Arg-119 to Phe-125. | <u> </u>            | Ser-46 to Leu-56, H | Glu-117 to Lys-124, H0575: 2, H0555: 2 | Pro-129 to Asp-135, H | Ala-144 to Gln-150, H0427: 1, H0196: | Gly-156 to Lys-162, H0052: 1 | Phe-182 to Pro-187, H0086: 1, H0123: | Pro-196 to Gln-201, H | Lys-217 to Asp-227. L | _                      | <u>.</u>  |                             | Leu-44 to Leu-49. H |         |         |         |
|  | 2216                                      | 2217                  |                   |                   |                   |                     |                     | 2218                |                     |  |                       |                                      |                              |                                      |                       |                       |                        |           | 2219                        |                     |         |         |         |
|  | 2 - 391                                   | 80 - 631              |                   |                   |                   |                     |                     | 2 - 1531            |                     |  |                       |                                      |                              |                                      |                       |                       | •                      |           | 1 - 315                     |                     | ,       |         |         |
|  | 41  | 42                    |                   |                   |                   |                     |                     | 43                  |                     |  |                       |                                      |                              | ٠.                                   |                       |                       | ,                      |           | 4                           |                     |         |         |         |
|  | 829981                                    | 830195                |                   |                   |                   |                     |                     | 830497              |                     |  |                       |                                      |                              |                                      |                       |                       |                        |           | 831453                      |                     |         |         |         |
| ·  | HITIQ02                                   | HWACG91               |                   |                   |                   |                     |                     | HUFBX52             |                     |  |                       |                                      |                              |                                      |                       |                       |                        |           | HWLJE49                     |                     |         |         |         |

| 130500,<br>133200, | 155600, | 171760, | 171760, | 185470, | 211420, | 230350, | 255800, | 601990, | 602023, | 602771 |                   | 102200,                                | 106100,             | 131100,                                | 131100,               | 131100,                                   | 133780,             | 147050,             | 153700,             | 161015,             | 164009,             | 168461,             | 168461,             | 168461,             | 180721,             | 180840,             | 191181,             | 193235,             |
|--------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|-------------------|--|---------------------|--|-----------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| i<br>i             |         |         |         |         |         |         |         |         |         |        |                   | 11q13                                  |                     |  |                       |   |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |
|                    |         | -       |         |         |         |         |         |         |         |        |                   | Gln-102 to Arg-109, AR061: 141, AR104: | 122, AR055: 119,    | Pro-315 to Asn-323, AR060: 115, AR052: | 82, AR033: 78, AR039: | Ala-381 to Ser-391, 72, AR089: 67, AR053: | 38, AR096: 32       | L0759: 4, H0617: 3, | L0749: 3, L0779: 3, | H0253: 2, H0188: 2, | H0165: 2, L0769: 2, | L0637: 2, L0761: 2, | L0665: 2, S0374: 2, | H0682: 2, H0659: 2, | L0748: 2, H0171: 1, | H0685: 1, H0341: 1, | H0255: 1, S0420: 1, | H0586: 1, H0599: 1, |
|                    |         |         |         |         |         |         |         |         |         |        | Ala-23 to Asp-41. | Gln-102 to Arg-109,                    | Gly-177 to Pro-183, | Pro-315 to Asn-323,                    | Ser-361 to Cys-369,   | Ala-381 to Ser-391,                       | Ser-419 to Ser-428. | -                   |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |
| •                  |         |         |         |         |         |         |         |         |         |        | 2220              | 2221                                   |                     |  |                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                    |         |         |         |         |         |         |         |         |         |        | 590 - 393         | 92 - 1450                              |                     |  |                       |   | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                    |         |         |         |         |         |         | •       |         |         |        | 45                | 46                                     |                     |  | ٠                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                    |         |         |         | ,       |         |         |         |         |         |        | 832454            | 833088                                 |                     |  |                       |   | ,                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |
|                    |         |         |         |         |         |         |         |         |         |        | HLQBT44           | HSLGG58                                |                     |  |                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| 209901,<br>232600,<br>259700,<br>259770,<br>600045, | 600319,<br>600528,<br>601884  |   |   | 116860                           | 129900,<br>233700,<br>600079           |  |
|---|---|---|---|----------------------------------|--|--|
|   |   | ·   | 19p   | 7a11 23                          | (m) 1 h                                | 6pter-q12  |
| l-îîîîîîî   | L0659: 1, L0526: 1,<br>L0518: 1, L0528: 1,<br>L0787: 1, L0666: 1,<br>L0663: 1, H0693: 1,<br>H0658: 1, S0152: 1, | \$0028: 1, L0439: 1,<br>L0745: 1, L0755: 1,<br>L0758: 1 and L0601: 1. | H0483: 1, S0045: 1, S0046: 1, H0486: 1, H0012: 1, H0355: 1, S0364: 1, H0087: 1, H0413: 1, H0366: 1. | S0028: 1, L0601: 1 and H0352: 1. | and L0756: 1.                          | L0757: 6, L0752: 5,<br>L0439: 4, S0150: 2,<br>L0774: 2, S3014: 2,<br>L0747: 2, L0750: 2,<br>S0276: 2, S0212: 1,<br>S0007: 1, H0574: 1, |
|   |   |   | Arg-8 to Gln-19,<br>Arg-25 to Lys-38.   | Ara-2 to Pro-12                  | Lys-32 to Asn-37,<br>His-75 to Asn-82. |  |
|   |   |   | 2222  | 2223                             |  | 2224   |
|   |   |   | 148 - 480   | 36. 353                          |  | 320 - 1096   |
|   |   |   | 47  | 48                               | 2                                      | 49   |
|   |   |   | 840756  | 840862                           |  | 841088   |
| ·   | ÷   |   | нснвозз   | HDTMK30                          |  | нррғх64  |

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|---|--|--|--|---|
|   |  |  |  | 108725,<br>120700,<br>133171,                                     |
|   |  | ;  |  | 19p13.3   |
| H0581: 1, H0068: 1,<br>S0036: 1, H0135: 1,<br>T0067: 1, L0065: 1,<br>H0529: 1, H0026: 1,<br>L0762: 1, L0773: 1,<br>L0521: 1, L0766: 1,<br>S0052: 1, H0521: 1,<br>L0748: 1, L0749: 1,<br>L0731: 1, L0759: 1,<br>L0485: 1, L0593: 1 and | AR089: 3, AR060: 2,<br>AR053: 2, AR096: 2,<br>AR061: 2, AR039: 1,<br>AR033: 1, AR055: 0,<br>AR104: 0<br>H0615: 1 | S0358: 1, H0052: 1,<br>H0375: 1, H0087: 1,<br>H0380: 1, H0435: 1,<br>H0521: 1, S0390: 1 and<br>L0366: 1. | S0114: 2, H0686: 1,<br>L0769: 1, L0644: 1,<br>L0662: 1, L0774: 1,<br>L0666: 1, H0659: 1,<br>L0750: 1 and S0436: 1.           | AR096: 2, AR089: 2,<br>AR061: 1, AR039: 0,<br>AR060: 0, AR055: 0, |
| <u> </u>  | Asp-1 to Glu-6.  |  | Ser-90 to His-96, S0114: 2, H0686.  Arg-127 to Gln-132. L0769: 1, L0644: L0662: 1, L0774: L0666: 1, H0659: L0750: 1 and S043 | Glu-14 to Gly-23.   |
|   | 2225   | 2226   | 2227   | 2228  |
| ·   | 1013 - 951   | 2 - 244  | 2 - 397  | 707 - 817   |
|   | 50   | 51   | 52   | 53  |
|   | 843485   | 844534   | 847355   | 847647  |
|   | HODFG71  | HCE3165  | НЅАУН65  | HBXFT41   |

| 136836,<br>145981,<br>147141,<br>164953,<br>188070,<br>600957       | 601238,<br>601846,<br>602216,<br>602477 |                           |   |
|---|---|---------------------------|---|
|   |   | •                         |   |
| AR033: 0, AR104: 0<br>L0717: 1, H0438: 1,<br>H0090: 1 and L0749: 1. |   | L0717: 1 and H0421:<br>1. | L0776: 5, L0439: 4,<br>L0805: 3, H0009: 2,<br>L0438: 2, H0580: 1,<br>S0280: 1, S0346: 1,<br>H0674: 1, L0774: 1,<br>L0786: 1, L0774: 1,<br>L0786: 1, L0778: 1,<br>L0752: 1, L0780: 1,<br>S0031: 1, L0608: 1,<br>S00412: 1 and L0698: 1.<br>H0328: 2 and H0509: 1,<br>AR096: 1, AR053: 1,<br>AR096: 1, AR053: 1,<br>AR061: 0, AR055: 0,<br>AR033: 0 |
|   |   |                           | Arg-19 to Pro-25.   |
|   |   | 2229                      | 2230  |
|   |   | 373 - 290                 | 3 - 86<br>276 - 338<br>628 - 735  |
|   |   | 54                        | 55 56 57  |
|   | •                                       | 847821                    | 859572  |
|   |   | HBMCM38                   | HACBO42<br>HODBF86<br>HOABP90   |

|                                   |                     |                     |                     |                     | •                   | •                   |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|------------------|------------------|------------------|------------------|------------------|------------------|-----------|------------------|---------------------|------------------|
|                                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
|                                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
|                                   |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
|                                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
|                                   |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  | •                |           |                  |                     |                  |
| 7,                                | 4,                  | 3                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
| 960:                              | 96:                 | )55:                | 40: 5,              | : 3 <b>,</b>        | 1: 3,               | 3,                  | 7:2,                | 3: 2,               | <b>‡</b> : 2,       | 7:2,                | 7: 2,               | F. 2,               | 3: 1,            | 8: 1,            | . 1,             | 8: 1,            | 9: 1,            | l: 1,            | 7: 1,  | 3: 1,            | 3: 1,            | 1: 1,            | 6: 1,            | 2: 1,            | . 1,             | 7: 1,     | 5: 1,            | 2: 1,               | <del>4.</del> 1. |
| 8, AR060:                         | , AR(               | , AR(               | 107                 | 1770                | <b>H052</b>         | 9362                | H059                | 800E                | 7 <u>/</u> 90I      | .051                | .074                | 30434               | <b>H058</b>      | H063             | 0360             | <b>H043</b>      | H059             | 1058             | 1045   | .016             | 1067             | H059             | H061             | 30142            | .0763            | 1.0767:   | 7770             | .0782               | H0144:           |
| 8                                 | ÷.                  | 1: 3                | 9: 5,               | . 4, I              | 7:3,1               | 3, I                | : 2,1               | 2, 7                | : 2, F              | F. 2, 1             | 2, 2, 1             | 2,5                 | i. 1, 1          | : 1,1            | : 1, S           | ): 1, ]          | 7: 1, 1          | : 1, F           | §: 1, 1                                      | 3: 1, I          | : 1, F           | 2: 1, 1          | 3: 1, ]          | 3: 1, 5          | 1,1              | : 1, I    | : 1, 1           | : 1; I              | : 1, 1           |
| 2233   Glu-146 to Pro-151, AR089: | \R10                | AR061: 3, AR055:    | H0659: 5, L0740: 5, | L0662: 4, L0771: 3, | HO547: 3, HO521: 3, | .0759: 3, L0362: 3, | H0013: 2, H0597: 2, | H0046: 2, H0083: 2, | 30214: 2, H0674: 2, | H0494: 2, L0517: 2, | 10682: 2, L0747: 2, | .0779: 2, S0434: 2, | 10685: 1, H0583: | H0661: 1, H0638: | S0420: 1, S0360: | H0580: 1, H0438: | H0497: 1, H0599: | S0010: 1, H0581: | H0545: 1, H0457:                             | H0563: 1, L0163: | .0055: 1, H0673: | H0212: 1, H0591: | H0038: 1, H0616: | H0488: 1, S0142: | S0344: 1, L0763: | .0770: 1, | .0766: 1, L0776: | .0659: 1, L0782: 1, | .0545: 1,        |
| 51, 4                             | 37, /               | 22,                 |                     | I                   | <u> </u>            | <del>  </del>       | بير                 | <u>,,,,,,,, .</u>   | <u>(v)</u>          | <u>, 11</u>         | <u> </u>            |                     | يملس             |                  | <u>(/)</u>       | <u>, 114</u>     | <u>,</u>         | <u>(v)</u>       | <u>, 114.</u>                                |                  | H                | <u>, 11,</u>     | <u> </u>         | <del></del>      | <u>(V)</u>       |           |                  | <u> </u>            | <u> </u>         |
| Pro-1                             | Ser-2               | Pro-                | Gly-                | Pro-4               |                     |                     |                     |                     |                     | -                   |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     | ٠                |
| 6 to                              | 1 to                | 17 to               | 55 to               | 9 to                |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
| lu-14                             | Ala-231 to Ser-237, | Asp-317 to Pro-322, | Lys-365 to Gly-371, | Phe-459 to Pro-464. |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     | ,                |
| 3.6                               | <u>&lt;</u>         | <u> </u>            | <u> </u>            | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     | •                |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
| 223                               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
| 910                               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
| 3 - 1610                          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     | •                |
| -                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  | <u>.                                    </u> |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
| 58                                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
| 0                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  | -                |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
| 862010                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
|                                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  | -                |                  |           |                  |                     |                  |
| HE8UE42                           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     | ٠,               |
| E8U                               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                  |                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                  |           |                  |                     |                  |
| H                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  | •                |                  |                  |                  |                  |  | ,                |                  |                  |                  |                  |                  |           |                  |                     | • •              |

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|---|--|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   | 8p23.2-<br>p23.1                           |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0672: 1, S0152: 1,<br>S0406: 1, H0627: 1,<br>S0390: 1, L0748: 1,<br>L0777: 1, L0758: 1,<br>S0026: 1, H0665: 1 and<br>H0543: 1. | L0748: 7, L0747: 6,<br>L0769: 5, L0731: 4, | S0444: 3, H0083: 3,<br>H0412: 3, L0775: 3 | H0670: 3, S0380: 3, | L0779: 3, L0758: 3, | H0352: 3, H0170: 2, | S0007: 2, T0048: 2, | H0309: 2, H0081: 2, | H0413: 2, H0059: 2, | H0641: 2, L0774: 2, | L0655: 2, L0526: 2, | H0144: 2, H0659: 2, | H0710: 2, H0696: 2, | S0027: 2, L0757: 2, | L0615: 1, S0040: 1, | H0295: 1, H0656: 1, | S0116: 1, H0341: 1, | H0484: 1, H0661: 1, | H0664: 1, S0360: 1, | S0408: 1, H0637: 1, | H0393: 1, H0411: 1, | H0392: 1, H0486: 1, | H0318: 1, L0738: 1, |
|   | Pro-1 to Met-6,<br>Thr-47 to Asp-54.       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |
|   | 2234                                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 65 - 316                                   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 59   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ·   | 862481                                     |   |                     |                     |                     | •.                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | HUSJ159                                    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|---------------------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|
| H0545: 1, L0471: 1, | H0014: 1, T0023: 1, | H0181: 1, H0606: 1, | H0673: 1, S0366: 1, | H0316: 1, H0163: 1, | H0087: 1, H0625: 1, | S0438: 1, H0633: 1, | S0210: 1, L0598: 1, | H0517: 1, L0520: 1, | L0371: 1, L0772: 1, | L0764: 1, L0521: 1, | L0549: 1, L0803: 1, | <br>L0783: 1, L0809: 1, | L0529: 1, L0663: 1, | Ĺ,       | H0593: 1, S0126: 1, | H0711: 1, H0658: 1, | H0660: 1, H0648: 1, | H0672: 1, S0378: 1, | S0404: 1, S0406: 1, | S0432: 1, S3014: 1, | L0740: 1, L0752: 1, | L0590: 1, L0599: 1, | H0668: 1, S0026: 1, | H0423: 1, H0422: 1, | S0424: 1 and H0712: 1. | L0803: 3, H0556: 2, | L0769: 2, L0800: 2, | HU263: 1, 30134: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                         |                     |          |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                        | Gln-1 to Ala-6,     | Arg-18 to His-24,   | Ala-80 to val-88,   |
|                     |                     | ,                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     | _                       |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2235                |                     |                     |
|                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                         |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 221 - 1090          | -                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 09                  |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |          |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                        | 863515              |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | <br>                    |                     | <u> </u> |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                        | HSSDM07             |                     |                     |

| Asp-97 to Asp-103, S0358: 1, H0642: 1, Arg-125 to Tyr-132, H0575: 1, H0135: 1, Arg-155 to Leu-161, L0809: 1, L0789: 1, Ser-167 to Asn-172, S0330: 1, L0750: 1 and Gln-182 to Lys-187, L0777: 1. Pro-206 to Thr-212, Glu-218 to Ser-228, Ser-236 to Pro-245. | L0596: 5, S0114: 2,<br>H0370: 1, H0012: 1,<br>H0620: 1 and S0038: 1. | AR089: 6, AR060: 5,<br>AR039: 4, AR096: 4,<br>AR033: 2, AR055: 2,<br>AR104: 1, AR061: 1,<br>AR053: 0<br>H0435: 2, H0395: 1<br>and H0402: 1. | L0471: 1, S0051: 1,<br>H0040: 1 and L0747: 1. | L0511: 11, L0499: 6,<br>L0509: 6, L0507: 5,<br>L0508: 5, L0500: 5,<br>L0508: 5, L0751: 5,<br>L0504: 3, L0514: 4,<br>L0504: 3, L0510: 3,<br>L0809: 3, L0748: 3,<br>L0505: 2, L0805: 2,<br>L0515: 2, H0659: 2,<br>H0670: 2, L0752: 2, |
|---|--|---|---|---|
| Asp-97 to Asp-103, S0358: 1, H0642: 1, Arg-125 to Tyr-132, H0575: 1, H0135: 1 Arg-155 to Leu-161, L0809: 1, L0789: 1, Ser-167 to Asn-172, S0330: 1, L0750: 1 Gln-182 to Lys-187, L0777: 1. Pro-206 to Thr-212, Glu-218 to Ser-228, Ser-236 to Pro-245.      | Phe-31 to Gln-36,<br>Glu-51 to Ile-79.                               | Pro-1 to Ser-10,<br>Leu-16 to Gly-21,<br>Thr-43 to Thr-55,<br>Lys-60 to Gly-67.   |   | Tyr-1 to Trp-6.   |
|   | 2236   | 2237  | 2238  | 2239  |
|   | 1101 -   | 352 - 552   | 494 - 628                                     | 2 - 460   |
|   | 61   | 62  | 63  | 49  |
|   | 866444   | 867969  | 869701  | 870486  |
|   | HBCBW52  | HOGAS18   | HHSDL18                                       | HTFMS34   |

|   | 104770,           | 107300,     | 107670, | 110700, | 131210,  | 136132, | 145001, | 146790, | 150292, | 159440, | 159440, | 159440, | 173610, | 186780, | 191030, | 191315, | 208250, | 233710, | 600923, | 600995, | 601412,                                      | 601518, | 601652,     | 602491 |
|---|-------------------|-------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--|---------|-------------|--------|
|   | 1q22-q25          |             |         |         |          | :       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |  |         |             |        |
| S0424: 2, H0431: 1,<br>H0150: 1, H0039: 1,<br>H0674: 1, H0087: 1,<br>T0041: 1, L0800: 1,<br>L0768: 1, L0789: 1,<br>L0664: 1 and L0749: 1. |                   |             |         |         | •        | :       | ,       |         |         |         |         |         | -       |         |         |         |         |         | ·       |         |  |         | •           |        |
|   | Ile-81 to Arg-91. |             |         |         |          | :       |         |         |         |         | -       |         |         |         |         | ,       |         |         |         |         |  |         |             |        |
|   | 8 2240            | <del></del> |         |         | <u> </u> | :       |         |         |         |         | •       |         |         |         |         | _       |         |         |         |         | <u>.                                    </u> |         | <del></del> |        |
|   | 1232 - 798        |             |         |         | •        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |  |         |             |        |
|   | 9                 |             |         |         |          | :       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |  |         |             |        |
|   | 874506            |             |         |         |          |         |         |         |         |         |         |         |         |         |         |         |         |         |         | ٠       |  |         |             |        |
|   | HLDOG81           |             |         |         |          |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |  |         |             |        |

| 300047,  | 300110,             | 300600,             | 301000,             | 301000,             | 301830,             | 309470,             | 309500,             | 309610,             | 309850,             | 311050,             | 312060              |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Xp11.23  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |
| L0751: 13, L0771: 10, Xp11.23<br>L0748: 9, L0601: 7. | S0356: 6, L0731: 6, | L0758: 6, L0769: 4, | L0565: 4, L0747: 4, | L0756: 4, L0596: 4, | H0598: 3, L0766: 3, | S0052: 3, S0206: 3, | L0750: 3, H0542: 3, | H0294: 2, H0657: 2, | L0785: 2, S0418: 2, | S0358: 2, S0360: 2, | H0586: 2, H0587: 2, | H0575: 2, H0081: 2, | H0620: 2, H0083: 2, | H0271: 2, H0622: 2, | H0617: 2, H0494: 2, | S0142: 2, L0374: 2, | L0521: 2, L0381: 2, | L0775: 2, L0776: 2, | L0659: 2, S0027: 2, | L0777: 2, L0759: 2, | H0445: 2, L0591: 2, | L0604: 2, H0556: 1, | T0002: 1, H0222: 1, | S0040: 1, H0295: 1, | S0218: 1, H0341: 1, | S0180: 1, S0212: 1, | H0484: 1, H0241: 1, | S0420: 1, S0354: 1, |
| Pro-3 to Arg-8,<br>Glv-34 to Thr-53.                 | Asp-60 to Ser-65,   | Phe-76 to Lys-81.   | ,                   | -                   |                     |                     | •                   |                     |                     | -                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 2241   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
| 2 - 628  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 99   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 874608   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HTXQF81  | ·                   |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |

| S00466: 1, 100287: 1, 100486: 1, 100486: 1, 100486: 1, 100486: 1, 10060: 1, 110057: 1, 10060: 1, 110057: 1, 10060: 1, 110057: 1, 100011: 1, 100 |                                 |  |                      |   |                      | <b>.</b>          |   |               |                   |                |
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|  |                                 |  |                      |   |                      |                   |   |               |                   |                |
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|  |                                 |  |                      |   |                      | · · · · · · · · · |   |               |                   | <u>.</u>       |
|  |                                 | 7; 1, 1, 1;<br>7; 1, 1, 1; |                      | 3.1.1.<br>3.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1 |                      |                   | -<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- |               | ); 1,<br>); 1,    | ?: 1,<br>)543: |
|  | 004<br>0278<br>048<br>042       | 1058<br>1059<br>1001<br>1037   | 1042<br>1042<br>1021 | 1009  | 046<br>1064<br>002   | 0761              | 7507<br>7860<br>7860<br>7860  | 0126          | 470<br>978<br>978 | 0192<br>Id H(  |
|  | 2,1,2<br>2,1,1<br>1,1,1         |  | <u> </u>             |   | 1, 1, 1, H           | , H, H, F         | -<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-   | 1, S          | 1, I              | 1, S<br>1 an   |
|  | )580<br>1046:<br>1623:<br>1060: | )253<br>)204<br>)123<br>)362:  | 0594<br>0188<br>0604 | )068<br>)634                                | 2560<br>2641<br>3441 | 763:              | 783:<br>783:<br>7383:   | )664<br>)380: | )555<br>)749      | 757:<br>276:   |
|  | HRAP                            | NEEE NEE   | <u>HHH</u>           | <u>thh</u>                                  | HHS                  | <u> </u>          | 333   | HNL           |                   | <u> </u>       |
|  | •                               |  | •                    |   |                      |                   |   |               |                   |                |
|  |                                 |  |                      |   |                      |                   |   |               |                   |                |
|  |                                 |  |                      |   |                      |                   |   |               |                   |                |
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|   |         | •                   |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---|---------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 120110,<br>121014,<br>136550  | 203310, | 269920,             | 601666,             | 602772              | ,                   |                        |           |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |
| 6q14-q21  |         |                     |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| AR061: 56, AR055:<br>46, AR104: 43, AR096:<br>27, AR060: 25, AR089: | 17      | S0356: 4, L0809: 4, | H0551: 2, S0342: 1, | S0212: 1, H0544: 1, | H0046: 1, L0803: 1, | L0774: 1, S0126: 1 and | S0152: 1. | L0766: 7, L0771: 4, | L0752: 4, L0438: 2, | L0756: 2, L0777: 2, | L0780: 2, H0341: 1, | T0115: 1            | 1.0776: 1           | L0663: 1, S0044: 1, | L0744: 1, L0439: 1, | L0754: 1, L0750: 1 and | L0779: 1. | H0140: 1, S0116: 1, | S0376: 1, S0360: 1, | L0695: 1, H0412: 1, | H0641: 1, L0662: 1, | L0803: 1, L0774: 1, | L0527: 1, L0659: 1, | L0663: 1, L0664: 1, | L0665: 1, H0682: 1, | H0435: 1, H0648: 1, | L0743: 1, L0731: 1, |
| Thr-5 to Gly-11,<br>Arg-63 to Lys-73,<br>Gln-92 to Gln-98           | ci      |                     |                     |                     |                     |                        |           | Glu-26 to Ser-33,   | Thr-82 to Phe-90,   | Met-107 to Asn-     | 114,                | Thr-125 to Glu-131, | His-175 to Asp-180. |                     |                     |                        |           |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |
| 2242  |         |                     |                     |                     |                     |                        |           | 2243                |                     |                     |                     |                     |                     |                     |                     |                        |           | 2244                |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 87 - 947  | ,       | :                   |                     |                     |                     |                        | ,         | 2 - 601             |                     |                     | ,                   |                     |                     |                     |                     |                        |           | 2 - 463             |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <i>L</i> 9  | _       |                     |                     |                     |                     |                        |           | 89                  |                     |                     |                     |                     |                     |                     |                     |                        |           | 69                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 874787  |         |                     |                     |                     |                     |                        |           | 874891              |                     |                     |                     |                     |                     |                     |                     |                        |           | 874930              |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HCRNG90   |         |                     |                     |                     |                     |                        |           | HPWCL64             |                     |                     |                     |                     |                     |                     |                     |                        |           | HWLMV62             |                     |                     |                     |                     | • .                 |                     |                     |                     |                     |

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|------------------------|-----------|--------------------|-----------------------|-----------------------|----|-----------------------|-----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                        |           |                    |                       |                       |    |                       |                       |                      |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | •                   | -                   |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |
| S0434: 1, L0596: 1 and | L0362: 1. | AR096: 102, AR055: | 51, AR089: 46, AR060: | 30, AR104: 29, AR061: | 61 | S0406: 23, L0362: 22, | S0410: 13, H0593: 12, | H0674: 10, S0434: 9, | L0764: 8, S0358: 7, | L0646: 7, H0506: 6, | H0509: 5, L0809: 5, | H0435: 5, S0376: 4, | L0765: 4, L0382: 4, | L0751: 4, H0686: 3, | H0252: 3, H0169: 3, | H0670: 3, S0330: 3, | H0656: 2, S0116: 2, | S0132: 2, H0581: 2, | H0596: 2, S0314: 2, | T0023: 2, H0059: 2, | S0440: 2, L0372: 2, | L0381: 2, L0659: 2, | L0666: 2, H0690: 2, | L0750: 2, L0596: 2, | L0601: 2, H0171: 1, | S0430: 1, H0650: 1, | H0663: 1, H0306: 1, | S0360: 1, T0104: 1, | T0071: 1, H0421: 1, |
|                        |           | 7                  | 4,                    |                       |    |                       | - <del></del>         | - <del>! 1</del> -   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        |           | 2245               |                       |                       |    |                       |                       | -                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        |           | 2 - 763            |                       |                       |    |                       |                       |                      |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        | •         | 0/                 |                       |                       |    |                       |                       |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        |           | 874931             |                       |                       |    |                       |                       |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ,                      |           | H2MAC06            |                       |                       |    |                       |                       |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | • •••               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| H0251: 1, H0263: 1,<br>H0204: 1, H0231: 1,<br>H0039: 1, H0622: 1,<br>L0194: 1, L0483: 1,<br>S0368: 1, H0032: 1,<br>H0090: 1, H0040: 1,<br>H0488: 1, H0494: 1,<br>S0352: 1, H0646: 1,<br>L0762: 1, L0800: 1,<br>L0753: 1, L0648: 1,<br>L0775: 1, L0540: 1,<br>L0783: 1, L0644: 1,<br>S0053: 1, S0374: 1,<br>H0682: 1, H0684: 1, | H0672: 1, S0328: 1,<br>S0152: 1, S0432: 1,<br>S0436: 1 and L0600: 1.<br>S0212: 1 and S0360: 1.<br>H0328: 2<br>S0330: 2, L0748: 2,<br>H0484: 1, T0114: 1 and<br>L0764: 1.   |
|--|--|
|  | Gly-2 to Gly-7,<br>Glu-9 to Gln-16,<br>Cys-24 to Gly-30,<br>Ala-35 to Ala-45,<br>Ala-55 to Ala-60,<br>Cys-79 to Leu-90,<br>Asp-95 to Asp-103.<br>Glu-29 to Asp-103.<br>Glu-29 to Asp-42.<br>Pro-6 to Leu-25,<br>Ser-34 to Arg-53,<br>Pro-71 to Gly-81, |
|  | 2246<br>2247<br>2248   |
|  | 2 - 385<br>323 - 487<br>3 - 440  |
|  | 71 72 73   |
|  | 875093<br>875352<br>875371   |
|  | HWLRF06 HODDO41 HCHMQ74  |

|                   |   |  |           |                     | `   |                     |                     |                     |                     |                         |                     | _                   |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|-------------------|---|--|-----------|---------------------|---|---------------------|---------------------|---------------------|---------------------|-------------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                   |   |  |           |                     |   |                     |                     |                     |                     |                         |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   | L0749: 3, S0356: 2,<br>L0766: 2, H0170: 1,<br>H0140: 1, L0770: 1, | L0662: 1, L0659: 1,<br>H0682: 1, L0752: 1,<br>L0731: 1, L0758: 1 and | H0542: 1. | L0745: 6, S0360: 4, | S0440: 2, H0341: 1,<br>S0212: 1, 1,0717: 1, | H0587: 1, H0497: 1, | H0574: 1, H0687: 1, | H0428: 1, S0422: 1, | L0667: 1, L0645: 1, | <br>L0649: 1, L0518: 1, | H0435: 1, S0380: 1, | H0518: 1, L0754: 1, | L0746: 1, S0434: 1, | L0592: 1 and S0424: 1. | L0748: 5, L0764: 4, | L0774: 4, L0758: 3, | L0662: 2, L0751: 2, | L0608: 2, L0760: 1, | S0444: 1, H0331: 1, | H0263: 1, H0674: 1, | L0770: 1, L0649: 1, | L0803: 1, L0775: 1, | L0809: 1, L0666: 1, |
| Ser-83 to Glu-94. |   |  |           |                     |   |                     |                     |                     |                     |                         | -                   |                     |                     |                        | Lys-1 to Ser-7.     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   | 2249  |  |           | 2250                |   |                     |                     |                     |                     |                         |                     |                     |                     |                        | 2251                |                     |                     |                     |                     |                     |                     |                     |                     |
| ,                 | 1 - 504   |  |           | 130 - 276           |   |                     |                     |                     |                     |                         |                     |                     |                     |                        | 65 - 292            |                     |                     |                     |                     |                     |                     |                     |                     |
|                   | 74  |  |           | 22                  |   |                     |                     |                     |                     |                         |                     |                     |                     | ,                      | 9/                  |                     | ·                   |                     |                     |                     |                     |                     | ·                   |
|                   | 875682  |  |           | 876052              |   |                     |                     |                     |                     |                         |                     |                     |                     |                        | 876487              |                     |                     |                     |                     |                     |                     |                     |                     |
|                   | HT3AI55   |  |           | HMVBD68             |   |                     |                     |                     |                     |                         |                     |                     |                     |                        | HOCTA74             |                     |                     |                     |                     |                     |                     |                     |                     |

| ·  |   | 103950,<br>120580,<br>131440,<br>139130,<br>142680,<br>176260,<br>200990,<br>216950,<br>600228,<br>600414,<br>600618, |  |  |
|--|---|---|--|--|
|  | <u>.</u>  | 103950<br>120580<br>131440<br>139130<br>142680<br>176260<br>190450<br>200990<br>216950<br>600218<br>600618            |  |  |
|  |   | 12p13   |  |  |
| L0663: 1, L0665: 1,<br>S0374: 1, L0565: 1,<br>H0648: 1, L0752: 1,<br>L0596: 1, L0361: 1,<br>S0026: 1 and H0506: 1. | L0761: 2, L0800: 1,<br>L0773: 1, L0803: 1 and<br>H0539: 1.  | S0356: 1, H0318: 1,<br>H0038: 1 and H0040: 1.   | H0208: 1, H0263: 1,<br>H0412: 1 and L0754: 1.              |  |
|  | Ala-1 to Thr-8,<br>Ala-15 to Pro-23,<br>Pro-68 to Gly-78,<br>Ser-82 to Gly-93,<br>Gly-118 to Ala-135. | Arg-1 to Arg-7,<br>Gly-72 to Asp-78,<br>Lys-83 to Gln-90.   | Met-2 to Leu-12,<br>Ser-16 to Asp-23,<br>Gly-38 to Lys-45. | Lys-44 to His-50,<br>Thr-110 to Pro-116,<br>Lys-178 to Gln-183,<br>Pro-196 to Lys-205, |
|  | 2252  | 2253  | 2254   | 2255   |
|  | 433 - 909   | 3 - 332   | 143 - 478  | 1426 - 203   |
|  | 77  | 78  | 79   | 80   |
|  | 876686  | 876696  | 877310   | 879484   |
| ·  | HISET05   | HCRQM22   | нгнтс92  | H2CAA49  |

|   |   | . ,  |
|---|---|--|
|   |   |  |
|   | AR052: 3, AR061: 3,<br>AR089: 3, AR096: 2,<br>AR053: 2, AR060: 2,<br>AR039: 1, AR104: 1<br>H0046: 6, L0769: 3,<br>L0778: 3, L0779: 3,<br>L0777: 3, S0358: 2,<br>S0005: 2, H0618: 2,<br>L0662: 2, L0776: 2,<br>H0547: 2, L0439: 2,<br>L0751: 2, L0600: 2,<br>S0040: 1, S0134: 1,<br>S0218: 1, H0650: 1,<br>H0549: 1, H0333: 1,<br>H0249: 1, H0620: 1,<br>H0048: 1, R0620: 1,<br>H0014: 1, S0250: 1,<br>H0063: 1, H0087: 1, | L0640: 1, L0770: 1,<br>L0764: 1, L0768: 1,<br>L0806: 1, L0663: 1,<br>L0664: 1, H0520: 1, |
| Arg-214 to Thr-220,<br>Asp-295 to Leu-301,<br>Pro-316 to Glu-324,<br>Glu-331 to Tyr-336,<br>Gly-347 to Val-354. |   |  |
|   | 2256  |  |
|   | 2 - 943   | ٠.   |
| · .<br>   | 81  |  |
|   | 880545  |  |
|   | нетк 094  |  |

| H0539: 1, S0390: 1,<br>S0028: 1, L0747: 1,<br>L0758: 1 and S0424: 1. | AR089: 2, AR096: 1,<br>AR060: 1, AR039: 0,<br>AR061: 0, AR033: 0,<br>AR104: 0<br>H0415: 2 | AR039: 105, AR096: 91, AR089: 70, AR104: 48, AR033: 48, AR053: 46, AR060: 43, AR055: 18, AR061: 16 S0444: 5, H0436: 5, L0521: 3, H0684: 3, H0659: 3, L0758: 3, S0440: 2, H0250: 2, H0266: 2, H0625: 2, H0266: 2, H0625: 2, H0690: 2, L0747: 2, H0690: 2, L0747: 2, H0690: 2, L0747: 2, H0690: 1, H0556: 1, H0422: 2, H0170: 1, H0422: 2, H0170: 1, H0422: 1, H0594: 1, H0686: 1, S0040: 1, S0342: 1, H0594: 1, H0686: 1, S0040: 1, S0342: 1, H0594: 1, H0686: 1, H0351: 1, H0638: 1, S0007: 1, |
|--|---|--|
|  | Asn-40 to Val-45.   |  |
|  | 2257  | 2258   |
|  | 5 - 502   | 2383   |
|  | .82   | 88   |
|  | 882466  | 882787   |
|  | HOFMO23   | HNTNP58  |

|  |                     |    |    |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 108985,             | 186921,             | 602092              |                     |   |          |                     |  |
|--|---------------------|----|----|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---|----------|---------------------|--|
|  |                     |    |    |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 11p15               |                     |                     |                     |   |          |                     |  |
| H0421: 1, L0738: 1,<br>H0545: 1, H0083: 1, | H0628: 1, H0321: 1, | 1, | Ξ, | S0422: 1, L0763: 1, | L0769: 1, L0772: 1, | L0764: 1, L0657: 1, |   | L0519: 1, L0665: 1, | H0698: 1, H0691: 1, | H0724: 1, H0520: 1, | H0547: 1, S0126: 1, | H0670: 1, H0660: 1, | H0666: 1, H0648: 1, | H0134: 1, S0028: 1, | L0756: 1, L0752: 1, | S0434: 1, L0589: 1, | H0136: 1, S0194: 1, | S0276: 1, H0543: 1 and | H0423: 1. | AR053: 6, AR089: 6, | AR039: 6, AR060: 5, | AR104: 4, AR096: 4, | AR033: 3, AR055: 3, | • | H0415: 1 | H0729: 1, H0392: 1, | H0013: 1, H0318: 1,<br>H0009: 1, H0328: 1. |
|  |                     |    |    |                     |                     |                     |   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     | -                   |   |          | Ser-8 to Cys-14,    | Trp-34 to Phe-45.                          |
|  |                     |    |    |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                      |           | 2259                |                     |                     |                     |   |          | 2260                |  |
|  | ,                   |    |    |                     |                     |                     |   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                        |           | 3 - 479             |                     |                     |                     |   |          | 2612 -              | 2478                                       |
|  |                     | ,  |    |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 84                  |                     |                     |                     |   |          | 85                  |  |
|  |                     |    |    |                     |                     |                     | - |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 888480              | -                   |                     |                     |   |          | 889128              |  |
|  |                     |    |    |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HOFNY28             |                     |                     |                     |   |          | HE8MQ01             |  |

| H0615: 1, T0041: 1,<br>L0662: 1, L0768: 1,<br>L0522: 1, H0436: 1,<br>H0444: 1 and S0308: 1. |  | AR033: 8, AR104: 6, AR089: 3, AR039: 3, AR080: 2, AR051: 2, AR055: 0 AR055: 0 H0539: 9, H0052: 5, T0010: 4, L0439: 4, L0770: 2, L0574: 2, L0770: 2, L0574: 2, L0770: 2, L0574: 2, L0747: 2, S0436: 2, H0542: 2, H0717: 1, S0010: 1, H0744: 1, H0562: 1, H0012: 1, S0388: 1, H0617: 1, S0388: 1 |
|---|--|--|
|   | Arg-1 to Asn-14,<br>Lys-47 to Glu-53,<br>Ser-59 to Ser-70,<br>Gln-82 to Gly-93,<br>Glu-100 to Glu-105,<br>Gly-123 to Ser-129,<br>Phe-164 to Lys-173. | ,  |
|   | 2261   | 2262   |
|   | 2 - 553  | 3 - 341  |
|   | 98   | 87   |
|   | 891139   | 894855   |
|   | HE2RG21  | HHENW77  |

| L0762: 1, L0631: 1,<br>L0638: 1, L5565: 1,<br>L0764: 1, L0794: 1,<br>L0649: 1, L0774: 1,<br>L0659: 1, L0655: 1,<br>L0659: 1, L0635: 1,<br>L0666: 1, H0638: 1,<br>L0666: 1, H0670: 1,<br>H0658: 1, H0670: 1,<br>H0660: 1, H0648: 1,<br>H0696: 1, L0742: 1,<br>L0750: 1, L0780: 1,<br>L0752: 1, H0445: 1,<br>H0543: 1, H0423: 1 and<br>H06422: 1. | H0415: 2<br>L0803: 8, S0408: 4,<br>L0804: 3, L0805: 3,<br>L0766: 2, L0779: 2,<br>S0114: 1, H0341: 1,<br>H0662: 1, S0222: 1,<br>H0486: 1, H0013: 1,<br>H0581: 1, H0615: 1,<br>H0581: 1, L0774: 1,<br>L0794: 1, L0774: 1,<br>L0795: 1, L0790: 1,<br>L0795: 1, L0790: 1,<br>L0795: 1, L0790: 1,<br>L0795: 1, L0790: 1,   |
|---|---|
|   | Phe-58 to Ala-63. H0415: 2  Ser-50 to Thr-57, L0803: 8, S0408: Pro-89 to Arg-96, L0804: 3, L0805: 7  Thr-128 to Glu-137, L0766: 2, L0779: Cys-150 to Asp-155, S0114: 1, H0341: Arg-176 to Lys-184, H0662: 1, S0222: Glu-186 to Cys-201, H0486: 1, H0013: Ala-238 to Ala-247, H0581: 1, H0615: Pro-270 to Pro-277, H0038: 1, S0440: Thr-283 to Thr-295, L0800: 1, L0521: Leu-329 to Arg-338, L0794: 1, L0774: Gln-345 to Arg-350. L0806: 1, L0790: L0792: 1, L4501: L0663: 1, H0519: |
|   | 2263  |
|   | 86 - 1165   |
|   | 68  |
|   | 897344  |
|   | HE8TE40   |

|   | 107970,<br>112262,<br>182600,<br>182870,<br>182870,<br>232700,<br>602086 |
|---|--|
|   | 14q22-q23  |
| S0380: 1, H0696: 1,<br>L0612: 1, L0745: 1,<br>L0756: 1, L0780: 1,<br>L0752: 1 and H0543: 1. | 25, 24, 25, 27, 27, 27, 27, 27, 27, 27, 27, 27, 27                       |
|   | 7701701011   |
|   | 2265   |
|   | 114 - 1418   |
|   | 06   |
|   | 900546   |
|   | HNTCH73  |

|   | 304040,<br>305100,<br>305450,<br>305450,<br>312760,<br>314250,<br>314580   |   |
|---|--|---|
|   | Xq13.1   |   |
| H0627: 1, H0631: 1,<br>L0749: 1, L0779: 1,<br>S0026: 1, H0136: 1 and<br>S0194: 1. | AR060: 3, AR033: 1,<br>AR089: 1, AR104: 1,<br>AR039: 0, AR055: 0,<br>AR039: 0, AR061: 0<br>S0360: 3, H0670: 3,<br>H0556: 2, H0292: 2,<br>H0686: 1, H0685: 1,<br>S0134: 1, S0116: 1,<br>H0662: 1, H0640: 1,<br>S0300: 1, H0586: 1,<br>H0642: 1, L0622: 1,<br>L0586: 1, L0622: 1,<br>L0586: 1, L0659: 1,<br>L0657: 1, L0666: 1,<br>L0657: 1, L0668: 1,<br>H0659: 1, H0648: 1,<br>H0659: 1, H0648: 1,<br>H0659: 1, H0648: 1,<br>H0659: 1, L0748: 1,<br>H0653: 1, H0547: 1,<br>H0653: 1, H0547: 1, | AR052: 2, AR033: 2,<br>AR096: 2, AR053: 1,<br>AR060: 1, AR104: 1,<br>AR055: 1, AR089: 1,                        |
| <u> </u>  | Lys-9 to Ser-15, Pro-29 to Ala-35.   | Pro-1 to Arg-13, AR052:<br>Pro-71 to Ser-77, AR096:<br>Asn-107 to Ser-122, AR060:<br>Val-150 to Pro-155, AR055: |
|   | 2266   | 2267  |
|   | 3 - 299  | 1 - 2418  |
|   | 91   | 92  |
|   | 902534   | 904763  |
|   | HHFBY53  | HDPIE44   |

|                                      |   |   |   |   |                     |                     |                       |                     | -                          |                     |                     |                               |                            |                     |                     |   |                     |                        |                   |   |                      |                     | • |                         |                     |                     |                     |                     |
|--------------------------------------|---|---|---|---|---------------------|---------------------|-----------------------|---------------------|----------------------------|---------------------|---------------------|-------------------------------|----------------------------|---------------------|---------------------|---|---------------------|------------------------|-------------------|---|----------------------|---------------------|---|-------------------------|---------------------|---------------------|---------------------|---------------------|
|                                      |   |   |   |   |                     |                     |                       |                     |                            |                     |                     |                               |                            |                     |                     |   |                     |                        |                   |   |                      |                     |   |                         |                     |                     |                     | _                   |
| 4R061: 0, AR039: 0                   | S0358: 3, H0622: 2,                     | H0553: 2, H0090: 2,                     | L0769: 2, L0794: 2,                     | H0547: 2, S0126: 2,                     | L0747: 2, H0265: 1, | S0418: 1, H0208: 1, | S0045: 1, H0486: 1,   | H0052: 1, H0046: 1, | H0024: 1, H0051: 1,        | H0375: 1, H0634: 1, | H0488: 1, T0042: 1, | H0494: 1, H0561: 1,           | S0438: 1, H0538: 1,        | L0800: 1, L0803: 1, | L0804: 1, L0805: 1, | L4501: 1, H0521: 1,                     | H0555: 1, L0779: 1, | S0436: 1 and H0506: 1. | AR033: 35, AR104: | Met-141 to His-150, 29, AR089: 13, AR096: | 11, AR060: 9, AR052: | 8, AR053: 7, AR055: |   | <br>L0745: 7, L0756: 7, | L0598: 6, S0346: 5, | S0036: 5, L0769: 4, | L0777: 4, L0731: 4, | S0010: 3, H0052: 3, |
| Ser-235 to Lys-241, AR061: 0, AR039: | Arg-349 to Phe-360, S0358: 3, H0622: 2, | Thr-363 to Glu-376, H0553: 2, H0090: 2, | Gln-438 to Thr-443, L0769: 2, L0794: 2, | Leu-466 to Ala-472, H0547: 2, S0126: 2, | Lys-475 to Thr-484, | Ser-511 to Val-516, | Glu-544 to Ser-550, S | Tyr-627 to Thr-632, | Arg-650 to Lys-658, H0024: | Asp-683 to Asn-     |                     | Glu-740 to Glu-746, H0494: 1, | Tyr-755 to Glu-760. S0438: |                     |                     |   |                     | <u> </u>               | Lys-33 to Arg-46, | Met-141 to His-150,                       | Thr-205 to Thr-211,  | Arg-218 to Ser-226. |   |                         |                     |                     |                     | <u> </u>            |
|                                      |   |   |   |   |                     |                     |                       |                     |                            |                     |                     |                               |                            |                     |                     |   |                     |                        | 2268              |   |                      |                     |   |                         |                     |                     | . :                 |                     |
|                                      |   |   |   |   | •                   |                     |                       |                     | ,                          |                     |                     |                               |                            |                     | ě                   |   |                     |                        | 3 - 683           |   |                      |                     |   |                         |                     |                     |                     |                     |
|                                      | •                                       |   |   |   |                     |                     |                       |                     | •                          | ,                   |                     |                               |                            |                     |                     |   |                     |                        | 93                |   |                      |                     |   |                         |                     |                     |                     |                     |
|                                      |   |   |   |   |                     |                     |                       |                     |                            |                     |                     |                               |                            |                     |                     | *************************************** |                     |                        | 904783            | •   |                      |                     |   |                         |                     |                     |                     |                     |
|                                      |   |   |   |   |                     |                     |                       |                     |                            |                     | 7.0                 |                               |                            |                     |                     |   |                     |                        | HHSAX10           |   |                      |                     |   | * .                     |                     |                     |                     |                     |

|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     | •                   |                     |                     |                     |                     | <u>.:</u>           |                     |                     |                     |                     |                     |                     |                     | -                   | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| S0051: 3, L0770: 3, | L0803: 3, L0438: 3, | L0758: 3, S0031: 3, | H0170: 2, H0438: 2, | S0049: 2, T0010: 2, | H0687: 2, H0038: 2, | H0616: 2, L0351: 2, | L0794: 2, L0806: 2, | L0790: 2, H0660: 2, | L0439: 2, L0751: 2, | L0754: 2, L0366: 2, | S6024: 1, S0300: 1, | H0351: 1, S0222: 1, | H0013: 1, T0048: 1, | H0194: 1, H0009: 1, | H0565: 1, H0050: 1, | H0242: 1, H0051: 1, | H0201: 1, S0388: 1, | H0083: 1, H0510: 1, | H0428: 1, H0031: 1, | L0455: 1, S0039: 1, | H0561: 1, L0369: 1, | L0520: 1, L0371: 1, | L0638: 1, L0796: 1, | L0637: 1, L0662: 1, | L0774: 1, L0635: 1, | L0809: 1, L0666: 1, | L0663: 1, H0659: 1, | H0648: 1, H0651: 1, | S0330: 1, S3014: 1, |
|                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | 9.4                 |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | :                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | _                   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     | <del></del>         |                     | -                   |                     |                     |                     |                     |                     |                     |                     | - · · · -           |                     |                     |                     |                     |                     | -                   |                     |                     |

|                     |                     |                     |                        |           |                     |                     | •                          |                     |                            |                     |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   | _                   |
|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|----------------------------|---------------------|----------------------------|---------------------|---|---|---|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|
|                     |                     |                     |                        |           |                     |                     |                            |                     |                            |                     |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |   |                     |
|                     |                     |                     |                        |           | •                   |                     |                            |                     |                            |                     |   |   |   |   |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     | •                   |   |                     |
| L0748: 1, L0740: 1, | L0780: 1, L0752: 1, | L0753: 1, L0759: 1, | S0260: 1, L0589: 1 and | L0592: 1. | AR052: 5, AR033: 4, | AR061: 3, AR089: 3, |                            |                     |                            | L0157: 4, L0777: 4, | L0759: 4, H0551: 3,                     | H0144: 3, L0438: 3,                     | S0360: 2, S0036: 2,                     | L0771: 2, L0775: 2,                     | L0659: 2, L0783: 2, | S0374: 2, H0658: 2, | H0672: 2, L0591: 2, | S0342: 1, S0358: 1, | H0722: 1, H0427: 1, | S0346: 1, H0581: 1, | H0327: 1, L0471: 1, | S0051: 1, S0003: 1, | H0040: 1, H0561: 1, | S0440: 1, S0150: 1, | L0770: 1, L0764: 1, | L0662: 1, L0774: 1, | L0526: 1, L0519: 1, |   | L0665: 1, L0352: 1, |
|                     |                     |                     |                        | ,         | Gly-1 to Ser-9,     | Arg-127 to Arg-138, | Tyr-188 to Arg-193, AR060: | Arg-246 to His-254, | Ser-428 to Arg-434, AR053: | Lys-487 to Lys-493, | Gly-515 to Leu-523, L0759: 4, H0551: 3, | Leu-545 to Asn-550, H0144: 3, L0438: 3, | Leu-579 to Ala-588, S0360: 2, S0036: 2, | Lys-631 to Cys-639, L0771: 2, L0775: 2, | Lys-717 to Ser-724. | •                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |   |                     |
|                     |                     |                     |                        |           | 5269                |                     |                            |                     |                            |                     |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   | •                   |
|                     |                     |                     |                        |           | 156 - 2459          |                     |                            | •                   |                            |                     |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | • | •                   |
|                     |                     |                     |                        |           | 94                  |                     |                            |                     |                            |                     |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | • |                     |
|                     | ,                   |                     |                        |           | 990906              |                     |                            |                     |                            |                     |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | • |                     |
|                     |                     |                     |                        |           | HPIAX83             |                     |                            |                     |                            |                     |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |

| H0547: 1, H0684: 1,<br>H0659: 1, H0648: 1,<br>H0539: 1, S0152: 1,<br>S0028: 1, L0756: 1,<br>L0779: 1, L0731: 1,<br>L0758: 1, S0434: 1,<br>S0436: 1, L0362: 1,<br>H0542: 1 and H0422: 1. | AR052: 2, AR089: 2,<br>AR055: 1, AR060: 1,<br>AR096: 1, AR033: 1,<br>AR061: 1, AR104: 1,<br>AR053: 0, AR039: 0<br>H0415: 2 | AR053: 2, AR089: 2,<br>AR055: 1, AR060: 1,<br>AR096: 1, AR061: 0,<br>AR104: 0<br>L0758: 6, H0620: 4,<br>L0769: 4, L0777: 4,<br>H0556: 3, S0420: 2,<br>L0770: 2, L0803: 2,<br>L0776: 2, L0659: 2,<br>L0776: 2, L0659: 2,<br>L0776: 2, L0659: 2,<br>L0776: 1, H0685: 1,<br>S0134: 1, H0484: 1,<br>S0134: 1, H0484: 1,<br>S0408: 1, H0580: 1,  |
|---|--|---|
|   | Gln-76 to Asp-82,<br>Lys-96 to Gln-103.  | Cys-1 to Cys-15, AR053: 2, AR089: Arg-24 to Gly-31, AR055: 1, AR060: Lys-37 to Glu-47, AR096: 1, AR061: Glu-85 to Lys-92, AR039: 0, AR033: Tyr-102 to Gly-107, AR104: 0 Asp-166 to Lys-181, L0758: 6, H0620: 4 Gln-248 to Phe-229, L0769: 4, L0777: 4, Gln-248 to Phe-254, H0556: 3, S0420: 2, Arg-260 to Cys-267, L0770: 2, L0803: 2, Ser-285 to Arg-296. L0776: 2, L0659: 2, L0748: 2, L0591: 2, H0265: 1, H0685: 1 S0134: 1, H0484: 1, S0354: 1, R0580: 1, S0408: 1, H0580: 1, |
|   | 2270   | 2271  |
|   | 3 - 401  | 565 - 1491  |
|   | 65   | 96  |
|   | 908746   | 911947  |
|   | HOFNG28  | HOFOB27   |

|  | 126600,<br>126600,<br>136435,<br>160980,<br>203800,<br>600678  |
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|  | 2p14-p16   |
| H0415: 1, H0587: 1,<br>H0599: 1, H0053: 1,<br>H0052: 1, H0081: 1,<br>H0059: 1, H0631: 1,<br>H0059: 1, H0633: 1,<br>L0766: 1, L0650: 1,<br>L0606: 1, L0791: 1,<br>L0664: 1, H0144: 1,<br>L0438: 1, H0547: 1,<br>H0690: 1, H0682: 1,<br>S0378: 1, H0521: 1,<br>L0439: 1, L0740: 1,<br>L0751: 1, L0755: 1,<br>L0595: 1, H0665: 1, | L0775: 6, H0659: 5,<br>L0438: 4, L0747: 4,<br>S0408: 3, L0439: 3,<br>H0040: 2, L0509: 2,<br>L0513: 2, L0751: 2,<br>L0756: 2, L0755: 2,<br>L0596: 2, L0362: 2,<br>S0040: 1, H0341: 1,<br>H0497: 1, S0049: 1,<br>H0497: 1, S0049: 1,<br>H0413: 1, L0769: 1,<br>H0413: 1, L0769: 1,   |
|  | Ala-65 to Lys-73, L0775: 6, H0659: 4  Phe-135 to Arg-140, L0438: 4, L0747: 4, Glu-174 to Pro-184, S0408: 3, L0439: 3, Glu-207 to Ala-212, H0040: 2, L0509: 2, Lys-220 to Asp-231, L0513: 2, L0751: 2, Glu-236 to Lys-252, L0756: 2, L0755: 2, Glu-268 to Asn-286, L0596: 2, L0362: 2, Leu-378 to Ser-384, S0040: 1, H0341: 1, Leu-448 to Asp-453, H0497: 1, S0049: 1, Glu-485 to Trp-495. H0373: 1, T0010: 1, R0413: 1, L0769: 1, L0764: 1 |
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| L0626: 1, L0768: 1,<br>L0387: 1, L0766: 1,<br>L0498: 1, L0650: 1,<br>L0774: 1, L0375: 1,<br>L0508: 1, L0655: 1,<br>L0657: 1, L0783: 1,<br>L0663: 1, L0352: 1,<br>H0547: 1, H0593: 1,<br>H0522: 1, H0696: 1,<br>L0750: 1, L0758: 1,<br>S0434: 1, L0604: 1 and<br>H0423: 1. | 6,4,6,2,6,4,7,6,4,6,4,6,4,6,4,6,4,6,4,6,4,6,4,6   |
| L0768: 1<br>L0766: 1<br>L0650: 1<br>L0655: 1<br>L0655: 1<br>L0783: 1<br>H0696: 1<br>L0758: 1<br>L0758: 1  | R096: 7, AR089: 6<br>R060: 5, AR053: 4<br>R104: 4, AR033: 3<br>R055: 3, AR061: 2<br>L0777: 13, L0766: 6, D803: 4, L0752: 4, D769: 3, L0794: 3, D769: 3, L0776: 2, D655: 2, L0776: 2, D655: 2, L0759: 2, D655: 2, L0759: 2, D655: 2, L0759: 1, D655: 1, H0024: 1, D656: 1, H0024: 1, D6090: 1, H0412: 1, D771: 1, D771: 1,   |
| L0768:<br>L0766:<br>L0650:<br>L0375:<br>L0375:<br>L0352:<br>H0593:<br>S0136:<br>H0696:<br>L0758:<br>L0604:  | 7, A] 3, A] 1, A] |
| %   | NR096: 7 NR104: 4 NR104: 4 NR055: 3 L0777: 13 L0777: 13 L0747: 3, 1 L0769: 3, 1 L0769: 2, 1 L0777: 2, 1 L0769: 2, 1 L0805: 2, 1 L0805: 2, 1 L0805: 1, 1 L08090: 1, 1 L0090: 1, 1 L0090: 1, 1 L0090: 1, 1  |
| L0626: 1, L0768: 1,<br>L0387: 1, L0766: 1,<br>L0498: 1, L0650: 1,<br>L0508: 1, L0375: 1,<br>L0657: 1, L0783: 1,<br>L0663: 1, L0352: 1,<br>H0547: 1, H0593: 1,<br>H0548: 1, S0136: 1,<br>H0522: 1, H0696: 1,<br>L0750: 1, L0758: 1,<br>S0434: 1, L0604: 1 8                | AR096: 7, AR089 AR060: 5, AR053 AR104: 4, AR033 AR055: 3, AR061 L0777: 13, L0765: 4 L0769: 3, L0794: 3 L0769: 3, L0794: 3 L0769: 3, L0752: 4 L0769: 2, L0776: 2 L0805: 2, L0776: 2 L0805: 2, L0776: 2 L0805: 2, L0776: 2 H057: 2, L0759: 2 H057: 1, H0024: 1 H0050: 1, H0024: 1 H0090: 1, H0412: 1 L0761: 1, L0771: 1   |
| <u> </u>  |   |
|   | Asn-21 to Lys-39,<br>Leu-43 to Lys-48.  |
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|   | 421 t   |
| •   | Asn-21 to Lys-39,<br>Leu-43 to Lys-48.  |
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|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |
| L0363: 1, L0804: 1, | H0519: 1, S0122: 1, | H0435: 1, H0658: 1, | H0648: 1, L0740: 1, | L0750: 1, L0757: 1, | H0543: 1 and H0423: 1. | S0444: 5, S0358: 4, | S0410: 4, S0406: 4, | L0759: 4, L0604: 4, | H0686: 3, H0728: 3, | H0083: 3, H0659: 3, | H0658: 3, L0747: 3, | L0581: 3, H0657: 2, | H0341: 2, H0484: 2, | H0734: 2, H0550: 2, | S0222: 2, H0052: 2, | T0006: 2, S0364: 2, | H0038: 2, H0413: 2, | S0422: 2, L0768: 2, | L0774: 2, L0775: 2, | L0783: 2, H0690: 2, | H0670: 2, H0648: 2, | S0380: 2, L0757: 2, | L0758: 2, L0588: 2, | L0608: 2, L0601: 2, | S0026: 2, H0170: 1, | S0114: 1, H0381: 1, | S0282: 1, H0638: 1, | S0442: 1, S0360: 1, | H0730: 1, H0735: 1, |
|                     |                     |                     |                     |                     |                        | Gly-41 to Gly-53,   | Gly-65 to Arg-77.   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        | 2274                |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | •                   |                     |                        | 2 - 232             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | i                   |
| L                   |                     |                     |                     |                     |                        | 66                  |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        | 915068              |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | •                   | ,                   |                     |                     |                        | HWMMQ47             |                     |                     |                     | <del>-</del>        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     | •                   |                     |                     |                     |

| 10046: 1,        | , H0587: 1, | L0622: 1, | ro114: 1,    | S0010: 1, | H0173: 1, | L0738: 1, | H0688: 1, | H0213: 1, | H0674: 1, | , H0412: 1, | L0065: 1, | , H0509: 1, | H0529: 1, | L0500: 1, | L0638: 1, | L0662: 1, | L0803: 1, | L0655: 1, | L5623: 1, | H0214: 1, | S0028: 1, | L0742: 1, | L0749: 1, | L0731: 1, | 10668: 1,        | and H0352: 1. | H0373: 1 and H0617: 14q11-q12 160760, | 160760,  | (102000, |
|------------------|-------------|-----------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|---------------|---------------------------------------|----------|----------|
| S0045: 1, S0046: | Ţ,          | H0559: 1, | <del>_</del> | T0082: 1, | H0421: 1, | H0231: 1, | H0569: 1, | H0428: 1, | H0166: 1, | H0616:1,    | H0625: 1, | S0438: 1, ] | H0131: 1, | •         | L0769: 1, |           | L0766: 1, | 7         | Ť         |           | H0732: 1, | L0741: 1, | L0754: 1, | L0752: 1, | S0436: 1, H0668: | H0136: 1 a    | H0373: 1                              | <u>i</u> |          |
|                  | _           |           | -            |           |           |           |           | •         |           |             |           |             |           |           |           |           |           |           |           |           | •         |           |           |           |                  |               | 2275                                  |          |          |
|                  |             |           | •            |           |           |           |           |           |           |             |           |             |           |           |           |           | ****      |           |           |           |           |           |           |           | ,                |               | 429 - 70                              |          |          |
|                  |             |           | •            |           |           |           |           |           |           |             |           |             |           |           |           |           |           |           |           |           |           |           |           |           |                  |               | 100                                   |          |          |
|                  |             |           |              |           |           |           |           |           |           |             |           |             |           |           | ,         |           |           |           | •         |           |           |           |           |           |                  |               | 915214                                |          |          |
|                  |             |           |              |           |           |           |           |           | •         |             |           |             | •         |           |           | -         |           |           |           |           |           |           |           |           |                  |               | HBGNY08                               |          |          |

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|-------------------------------|--------------------|--------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 600243,<br>600792,<br>601369, | 602086,<br>602279, | 602279 |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                               |                    |        |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                               |                    |        | H0615: 2 and S0052: 1. | ) 10/0 t II + 0FO t | L0731: 7, L0605: 6, | L0766: 4, L0655: 4, | L0659: 4, L0756: 4, | L0803: 3, H0648: 3, | L0777: 3, S0358: 2, | S0408: 2, L0021: 2, | H0014: 2, T0010: 2, | L0143: 2, H0641: 2, | L0638: 2, L0662: 2, | L0794: 2, L0776: 2, | L0657: 2, L0809: 2, | L0666: 2, L0663: 2, | L0751: 2, L0755: 2, | L0758: 2, L0588: 2, | H0543: 2, H0170: 1, | H0657: 1, S0212: 1, | H0661: 1, H0663: 1, | S0420: 1, S0360: 1, | L0717: 1, L0586: 1, | L0105: 1, H0318: 1, | H0581: 1, H0052: 1, | H0309: 1, L0157: 1, |
|                               |                    |        | Arg-7 to Arg-12,       | FT0-77 to ASp-62.   | Pro-1 to Val-11,    | Asp-25 to Glu-34,   | Arg-117 to Gln-122, | Thr-147 to Arg-152, |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                               |                    |        | 2276                   | 1000                | 2277                |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                               |                    |        | 567 - 941              |                     | 3 - 536             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
|                               | •                  |        | 101                    | ,00                 | 102                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                               |                    |        | 917394                 |                     | 917716              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                               |                    | ,      | HODGH45                |                     | HWLKE58             |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | :         | 141750,             | 141800,             | 141800,             | 141800, | 141800,             | 141850,             | 141850,                | 141850,             | 141850,             | 141850,             | 156850,             | 186580,             |
|--|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |  |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        |           | 16p13.3             |                     |                     |         |                     |                     |                        |                     |                     |                     |                     |                     |
| L0471: 1, H0024: 1,<br>H0354: 1, S0003: 1, |  | H0090: 1, H0272: 1, | T0041: 1, S0440: 1, | S0142: 1, S0210: 1, | L0372: 1, L0645: 1, | L0764: 1, L0651: 1, | L0656: 1, L0789: 1, | L0665: 1, S0126: 1, | H0682: 1, H0435: 1, | H0659: 1, S0380: 1, | H0518: 1, H0696: 1, | L0439: 1, L0740: 1, | L0746: 1, L0750: 1, | L0779: 1, L0752: 1 and | S0260: 1. | H0424: 5, H0550: 3, | L0769: 3, L0601: 3, | S0408: 2, H0592: 2, |         | L0774: 2, L0806: 2, | L0776: 2, H0659: 2, | L0777: 2, L0780: 2,    | L0759: 2, H0136: 2, | S0424: 2, H0170: 1, | H0556: 1, H0341: 1, | S0418: 1, S0356: 1, | S0442: 1, S0360: 1, |
|  |  |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                        |           | Phe-1 to Arg-7,     | Arg-40 to Gly-46,   | Lys-96 to Ser-102,  | ۱,      | Asp-260 to Leu-265, | Arg-308 to Gly-314. | ,                      |                     |                     |                     |                     |                     |
|  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2278                |                     |                     |         |                     |                     |                        |                     |                     |                     |                     |                     |
|  |  |                     |                     |                     | 1                   |                     |                     |                     |                     | •                   |                     |                     |                     |                        |           | 1 - 942             |                     |                     |         |                     | -                   | <del>- 11/5 - 11</del> |                     |                     |                     |                     |                     |
|  |  | •                   |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        |           | 103                 |                     |                     |         |                     |                     |                        |                     |                     |                     |                     |                     |
|  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 919433              |                     |                     |         |                     |                     |                        |                     |                     |                     |                     |                     |
|  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HRADL40             |                     |                     |         |                     |                     |                        |                     |                     |                     |                     |                     |

| 191092,<br>600140,<br>600273, | 601785   | 148370,<br>238600,<br>238600,<br>238600   | 238600,<br>600143,<br>601385,                                     |
|-------------------------------|--|---|---|
| . •                           | ·<br>·   | 8p22  |   |
|                               | 1, H0622: 1, 1, H0617: 1, 1, H0617: 1, 1, L0773: 1, 1, L0658: 1, 1, L0658: 1, 1, L0658: 1, 1, L0658: 1, 1, L0668: 1, 1, H0668: 1, 1, H0698: 1, 1, L0748: 1, 1, L0748: 1, 1, L0751: 1, 1, L0596: 1, 1, L0596: 1, 1, L0596: 1, 1, L0596: 1, 1, L0598: 1, 1, L0 | AR060: 2, AR061: 2,<br>AR055: 1, AR089: 1,<br>AR096: 1, AR033: 0,<br>AR039: 0   | H0415: 2 and H0414:   |
|                               |  | Ala-24 to Phe-30,<br>Asn-42 to Trp-48,<br>Val-57 to Leu-62,<br>Ser-90 to Gln-96 | Lys-104 to Cys-112,<br>Gly-150 to Gly-159,<br>Tyr-180 to Cys-186, |
| ,                             |  | 2279  |   |
|                               |  | 92 - 1129   |   |
|                               |  | 104   |   |
|                               |  | 919895  |   |
|                               |  | HOFMP73   |   |

|                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | . <u>-</u>          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 602629              |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>:</u>            |                     |                     |                     |                     |                     |                     |                     | ٠                   |
|                     |                     |                     |                     |                   |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | H0415: 4          | L0805: 9, L0747: 9, | L0770: 8, L0794: 8, | L0756: 8, H0271: 7, | L0769: 5, L0748: 5, | L0750: 5, H0305: 4, | L0766: 4, L0804: 4, | L0809: 4, H0265: 3, | H0052: 3, H0051: 3, | H0623: 3, L0803: 3, | L0775: 3, H0556: 2, | H0441: 2, H0486: 2, | H0069: 2, H0050: 2, | H0620: 2, S0051: 2, | H0416: 2, S0036: 2, | H0135: 2, S0002: 2, | L0761: 2, L0768: 2, | L0666: 2, H0144: 2, | L0438: 2, L0439: 2, | L0777: 2, S0114: 1, | L0785: 1, S0001: 1, | S0035: 1, H0402: 1, | H0638: 1, H0580: 1, | S0045: 1, S0046: 1, | S0222: 1, H0333: 1, | H0635: 1, H0036: 1, |
| Pro-193 to Asp-210, | Pro-220 to Ser-235, | Ser-306 to Asp-313, | Thr-339 to Ile-346. | Phe-24 to Glu-48. | Tyr-44 to Trp-63,   | Thr-84 to Thr-90,   | Gln-111 to Tyr-116. | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | 2280              | 2281                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     | · · · · ·           |                     | 21 - 272          | 1 - 666             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |
|                     |                     |                     |                     | 105               | 106                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | •                   |                     |                     | 920253            | 921707              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| i                   |                     | •                   |                     | HOFMS02           | HUVHD12             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|            |                  |             |                  |           | •         |           |           |           | ,         |             |          |           | ·        |           |                  |                  |                     |                      |                     |                    |                  |                    |                    |                  | · · ·       |           |                 |                     |           |
|------------|------------------|-------------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|----------|-----------|----------|-----------|------------------|------------------|---------------------|----------------------|---------------------|--------------------|------------------|--------------------|--------------------|------------------|-------------|-----------|-----------------|---------------------|-----------|
|            |                  |             |                  |           |           |           |           |           |           |             |          |           |          |           |                  |                  |                     |                      |                     |                    |                  |                    |                    |                  |             |           |                 |                     |           |
|            |                  |             |                  |           |           |           | <u></u>   |           |           |             |          |           |          |           |                  | •                |                     |                      |                     |                    |                  |                    |                    |                  |             |           |                 |                     | [         |
|            |                  |             |                  |           |           |           |           |           |           |             |          |           |          |           |                  |                  |                     |                      |                     |                    |                  |                    |                    |                  |             |           |                 |                     |           |
| <u> </u>   |                  |             | -                |           |           |           |           |           |           |             |          |           | •        |           |                  | -                | 3: 1.               | 7,                   |                     |                    |                  |                    |                    |                  |             |           |                 |                     |           |
| , H0024: 1 | 068: 1           | l, H0412: 1 | 352: 1,          | L0796: 1, | L0800: 1, | L0651: 1, | L0790: 1, | L0663: 1, | S0052: 1, | , S0216: 1, | H0593: 1 | H0660: 1  | L0743: 1 | L0779: 1, | 436: 1,          | 366: 1,          | S0106: 1 and H0423: | L0752: 24, L0751: 7, | .0748: 6, L0777: 6, | 742: 5,            | 358: 4,          | 756: 4,            | 757: 3,            | 444: 2,          | L0770: 2,   | L0773: 2, | 519:2           | .0743: 2, L0740: 2, | L0758: 2, |
| _          | H0687: 1, H0068: | ; 1, HC     | 10056: 1, S0352: | Ξ,        |           | <u> </u>  |           |           | Ť,        | ΨĨ          | Ę,       | : 1, H(   |          |           | .0758: 1, S0436: | .0361: 1, L0366: | : 1 and             | 2: 24,               | : 6, LO             | .0775: 5, L0742: 5 | .0749: 5, S0358: | .0776: 4, L0756: 4 | S0376: 3, L0757: 3 | S0212: 2, S0444: | : 2, LO     | : 2, L0   | 0774: 2, H0519: | : 2, L0             | 2, L0     |
| H0581:     | H0687            | H0040:      | H0056            | 1.0763:   | 1.5575:   | L0375:    | L0788:    | L0791:    | L0665:    | S0428:      | H0519:   | H0658: 1, | H0555:   | L0786: ]  | L0758            | L0361            | S0106               | 1.075                | L0748               | L0775              | L0749            | L0776              | S0376              | S0212            | S0010: 2, I | L0764: 2, | L0774           | L0743               | L0731: 2, |
|            |                  |             |                  |           |           |           |           | ,         |           |             |          |           |          |           |                  |                  |                     |                      |                     |                    |                  |                    |                    |                  |             |           |                 |                     | İ         |
|            |                  |             |                  |           |           |           | ,         |           |           |             |          |           |          |           |                  |                  |                     |                      |                     |                    |                  |                    |                    | ,                |             |           |                 |                     |           |
|            |                  |             |                  |           |           |           |           |           |           |             |          |           |          |           |                  |                  |                     |                      |                     |                    |                  |                    |                    |                  |             |           |                 |                     |           |
|            |                  |             |                  |           |           |           |           |           |           |             |          |           |          |           | ,,,,             |                  |                     | 2282                 |                     |                    |                  |                    |                    |                  |             |           | ,               |                     | •         |
|            |                  |             |                  |           |           |           |           |           |           |             |          |           |          |           |                  | •                |                     | 608                  |                     |                    | •                |                    |                    | ,                |             |           |                 |                     |           |
|            |                  |             |                  |           |           |           |           |           |           |             |          |           |          |           |                  |                  |                     | 327 - 809            |                     |                    |                  |                    |                    |                  |             |           |                 |                     |           |
| ,          |                  |             |                  |           |           |           |           |           |           |             |          |           |          |           |                  |                  |                     | 107                  |                     |                    |                  |                    |                    |                  |             |           |                 |                     |           |
|            |                  |             |                  |           |           |           |           |           |           |             |          |           |          |           |                  |                  |                     | 91                   |                     |                    |                  |                    |                    |                  |             | ,         |                 |                     |           |
|            |                  |             |                  |           |           |           |           |           |           | •           |          |           | ·        |           |                  |                  |                     | 922191               |                     | •                  |                  |                    |                    |                  |             |           |                 |                     |           |
|            |                  |             |                  | _         |           |           |           |           |           |             |          |           | •        |           |                  |                  |                     | 2041                 |                     |                    |                  |                    |                    |                  |             |           |                 |                     |           |
|            |                  |             |                  |           |           |           |           |           |           |             |          |           |          |           |                  |                  |                     | HMVDQ41              |                     |                    |                  |                    |                    |                  |             |           |                 |                     |           |

|   |   |  | ·   | ,      |                     |                     |  |                     |                     |                     |   | 4 .                                   |                           |                           | 133510,<br>133510, |
|---|---|--|---|--------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---|---------------------------------------|---------------------------|---------------------------|--------------------|
|   | ı   |  |   |        |                     |                     |  |                     |                     |                     |   |                                       |                           | ,                         | 2q21-q22           |
| L0604: 2, L0603: 2,<br>S0298: 1, H0661: 1,<br>S0442: 1, S0354: 1, | S0360: 1, S0408: 1,<br>H0632: 1, H0156: 1,<br>H0421: 1, H0196: 1, | H0052: 1, L0738: 1,<br>H0009: 1, L0471: 1,<br>H0239: 1, S0003: 1 | T0067: 1, H0413: 1,<br>H0059: 1, S0438: 1 | î _î _ | L0803: 1, L0804: 1, | L0375: 1, L0806: 1, | LU/83: 1, SU3/4: 1,<br>H0659: 1, S0328: 1, | S0152: 1, S0404: 1, | S0406: 1, S0027: 1, | L0439: 1, L0779: 1, | LU/53: 1, LU/53: 1,<br>L0759: 1 and S0242: 1. | H0615: 2                              | H0615: 3 and H0352:<br>1. | H0328: 1 and H0615:<br>1. |                    |
|   |   |  |   |        |                     |                     |  | -                   | ,                   |                     |   | Lys-1 to Trp-26,<br>Lys-34 to Ile-42. |                           | Lys-10 to Arg-32.         |                    |
|   |   |  |   |        |                     |                     |  |                     |                     |                     |   | 2283                                  | 2284                      | 2285                      | 2286               |
|   |   |  |   |        | •                   |                     |  |                     |                     |                     |   | 3 - 227                               | 1 - 174                   | 3-311                     | 1368 - 781         |
|   |   |  |   |        |                     |                     |  |                     |                     |                     |   | 108                                   | 109                       | 110                       | 111                |
|   |   |  |   |        |                     |                     |  |                     |                     |                     |   | 922879                                | 922955                    | 925296                    | 925735             |
|   |   |  |   |        |                     |                     |  |                     | ,                   |                     |   | HODGI03                               | HODHD14                   | НОДДС03                   | HVCAG04            |

| 165320,<br>223000,<br>223000,<br>256030 |  |   |  |   |
|---|--|---|--|---|
|   |  |   | ·  |   |
|   | L0756: 6, L0776: 2,<br>L0744: 2, H0486: 1,<br>H0327: 1, S0003: 1,<br>H0090: 1, L0761: 1,<br>L0662: 1, L0766: 1,<br>L0518: 1, H0659: 1,<br>H0670: 1, S0406: 1,<br>L0777: 1, L0780: 1,<br>L0605: 1, L0366: 1 and | AR053: 3, AR089: 3,<br>AR096: 2, AR060: 2,<br>AR033: 2, AR061: 1,<br>AR104: 1, AR055: 0 | S0212: 4, H0580: 1,<br>S0045: 1, H0351: 1,<br>S0010: 1, S0003: 1,<br>H0560: 1, S0002: 1 and<br>L0604: 1. | L0758: 4, H0556: 3,<br>L0751: 3, S0408: 2,<br>H0618: 2, L0768: 2,<br>H0547: 2, H0660: 2,<br>L0754: 2, L0779: 2, |
|   |  | Ser-59 to Leu-66,<br>Leu-76 to Trp-87,<br>Arg-92 to Gly-105.                            | Pro-21 to Ala-28. Pro-18 to Leu-25, Asp-72 to Ser-82, Pro-97 to Gly-107, Leu-110 to Ser-137.             | Ala-9 to Trp-14.  |
|   | 2287.  | 2288  | 2290   | 2291  |
|   | 31 - 129   | 2028 -<br>2399  | 3 - 983  | 2 - 1150  |
|   | 112  | 113   | 114  | 116   |
|   | 925837   | 926067  | 928396   | 933568  |
|   | HCRCE02  | HHERA91   | HAGDL82<br>HWBDS34   | H6ESA39   |

| ·   |                     |                     |  |
|---|---------------------|---------------------|--|
|   |                     |                     |  |
| '   |                     |                     |  |
| H0661: 1, H0370: 1,<br>H0491: 1, H0318: 1,<br>H0566: 1, H0551: 1,<br>T0004: 1, L0435: 1,<br>L0769: 1, L4747: 1,<br>L5566: 1, L0772: 1,<br>L0644: 1, L0764: 1,<br>L0773: 1, L0774: 1,<br>L0775: 1, L0806: 1,<br>L0807: 1, L0659: 1,<br>L0809: 1, L0665: 1, | .0756: 1, L0777: 1, | H0659: 2 and L0777: | L0794: 11, L0511: 11,<br>L0748: 10, L0747: 8,<br>L0499: 6, L0805: 6,<br>L0509: 6, L0507: 5,<br>L0502: 5, L0500: 5,<br>L0766: 5, L0809: 5,<br>L0751: 5, L0769: 5,<br>L0752: 5, L0764: 4,<br>L0662: 4, L0649: 4,<br>L0493: 4, L0514: 4,<br>H0670: 4, L0779: 4,<br>H0645: 4, H0657: 3,<br>H0036: 3, S0422: 3, |
| H0661:<br>H0491:<br>H0566:<br>T0004: J<br>L0769: J<br>L0773: J<br>L0773: J<br>L0807: J<br>L0809: J  | 1.075               | H06<br>2.           | L074<br>L074<br>L050<br>L050<br>L076<br>L075<br>L075<br>L075<br>H064<br>H064   |
|   |                     | Val-18 to Glu-33.   |  |
|   | ·.                  | 2292                | 2293   |
|   | ,                   | 147 - 281           | 2 - 562 ·  |
|   |                     | 117                 | 118  |
|   |                     | 933678              | 933989   |
|   |                     | HPCOR06             | HTFN006  |

|                    |                     |                     |                     |                     |                     | •                   |                     |                     |                     |               |                     |                     |                     |                     |                     |                  | ·                   |                     |                     |                  |                  |                  |                  |                  | -                |                        |                  |                  |                  |
|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|---------------------|---------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------------|------------------|------------------|------------------|
|                    |                     |                     |                     | -                   |                     |                     |                     |                     |                     |               |                     |                     |                     |                     |                     |                  |                     |                     |                     |                  |                  |                  | -                | ·                |                  |                        |                  |                  |                  |
| 58: 3,             | 39: 3,              | 39: 3,              | 19: 3,              | 42: 2,              | <u> 4</u> . 2,      | 80: 2,              | 86: 2,              | 28: 2,              | 5: 2,               | L0657: 2,     | 18: 2,              | 51: 2,              | 96: 2,              | 36: 2,              | 55: 2,              | 59: 2,           | 15: 2,              | 12: 2,              | 86: 1,              | [2: 1,           | 55: 1,           | 6: 1,            | 31: 1,           | 33: 1,           | 35: 1,           | 04: 1,                 | 81: 1,           | 23: 1,           | 15: 1,           |
| .0504: 3, L0768: 3 | .0510: 3, L0789: 3, | H0659: 3, L0439: 3, | .0745: 3, L0749: 3, | H0656: 2, S0442: 2, | S0358: 2, S0444: 2, | S0360: 2, H0580: 2, | H0549: 2, H0486: 2, | H0687: 2, H0328: 2, | S0438: 2, L0505: 2, | .0775: 2, L06 | .0515: 2, L0518: 2, | H0658: 2, H0651: 2, | S0380: 2, H0696: 2, | S0406: 2, H0436: 2, | .0777: 2, L0755: 2, | .0758: 2, L0759: | .0588: 2, L0605: 2, | H0423: 2, S0412: 2, | S0424: 2, H0686: 1, | S0116: 1, S0212: | H0254: 1, H0255: | S0418: 1, S0476: | S6022: 1, H0431: | H0497: 1, H0333: | F0114: 1, H0635: | H0421: 1, H0204:       | H0150: 1, H0081: | H0047: 1, H0023: | H0083: 1, H0615: |
| 1                  | <u>٦</u>            | <u> </u>            | ᆜ                   | <u>E</u>            | S                   | S                   | <u> </u>            | <u> </u>            | S                   | 1             |                     | <u> </u>            | S                   | S                   | <u>, H</u>          | ᆸ                | 1                   | <u> </u>            | S                   | S                | <u> </u>         | S                | <u>S</u>         | <u> </u>         | L                | <u>. <del>II</del></u> | <u> </u>         | <u> </u>         | <u>æ</u>         |
|                    |                     |                     |                     | <del></del> ,       |                     |                     |                     |                     |                     |               |                     | <del></del>         |                     | -                   |                     |                  |                     |                     |                     |                  |                  |                  |                  |                  |                  |                        |                  |                  |                  |
|                    |                     |                     |                     | •                   |                     |                     |                     |                     |                     |               |                     |                     |                     |                     |                     |                  | -                   |                     | J.                  | <del></del>      |                  |                  |                  |                  |                  |                        |                  |                  |                  |
|                    |                     |                     | -                   |                     |                     | -                   |                     |                     |                     |               |                     |                     |                     |                     |                     | -                |                     |                     |                     |                  | •                |                  |                  |                  |                  |                        |                  | •                |                  |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |               |                     |                     |                     |                     |                     |                  |                     |                     |                     |                  |                  |                  |                  |                  |                  |                        | •                |                  |                  |
|                    | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |               |                     |                     |                     |                     |                     |                  |                     |                     |                     |                  |                  |                  | . •              |                  |                  |                        |                  |                  |                  |

| H0039: 1, H0674: 1,<br>L0455: 1, H0087: 1,<br>H0059: 1, T0041: 1,<br>T0042: 1, H0494: 1,<br>H0509: 1, H0646: 1,<br>S0002: 1, L0800: 1,<br>L0644: 1, L0533: 1,<br>L0644: 1, L0533: 1,<br>L0659: 1, L0661: 1,<br>L0659: 1, L0793: 1,<br>L0664: 1, H0144: 1,<br>L0664: 1, H0711: 1,<br>H0547: 1, H0711: 1,<br>H0547: 1, L0754: 1,<br>L0731: 1, L0757: 1,<br>L0592: 1, S0194: 1,<br>H0543: 1, H0422: 1,<br>H0543: 1, H0422: 1, | L0803: 4, H0615: 2,<br>S6028: 1, L0521: 1,<br>L0662: 1, L0794: 1 and<br>L0756: 1. | H0039: 3, L0794: 2,<br>H0650: 1, S0212: 1,<br>S0358: 1, H0441: 1,<br>H0587: 1, S0003: 1,<br>H0494: 1, H0529: 1, |
|--|---|---|
|  | Arg-40 to Gln-45.   | Lys-121 to Arg-127.   |
|  | 2294  | 2295  |
|  | 130 - 339   | 3 - 1283  |
|  | 119   | 120   |
|  | 935520  | 935717  |
|  | HODFY08   | HRACK27   |

| <u> </u>         |                    |                    |                        |                    |                         |                       |                       |                       |            |               |                       |                       |               |               | -             |                         |               |                       |               |               |                       |               |               |               |                   |                       |               |                       | ٦                      |
|------------------|--------------------|--------------------|------------------------|--------------------|-------------------------|-----------------------|-----------------------|-----------------------|------------|---------------|-----------------------|-----------------------|---------------|---------------|---------------|-------------------------|---------------|-----------------------|---------------|---------------|-----------------------|---------------|---------------|---------------|-------------------|-----------------------|---------------|-----------------------|------------------------|
|                  |                    |                    |                        | 147200,            | 178640,                 | 216900                |                       |                       |            |               |                       |                       |               |               |               |                         |               |                       |               |               |                       |               | -             |               |                   |                       |               |                       |                        |
|                  |                    |                    |                        | 2p12               |                         |                       |                       |                       |            |               |                       |                       |               |               |               |                         |               |                       |               |               |                       |               |               |               |                   |                       |               |                       |                        |
| H0690: 1,        | H0696: 1,          | L0439: 1,          | .0779: 1 and S0242: 1. | S0358: 250, H0087: | 131, S0376: 112, L0751: | 93, H0445: 88, H0506: | 87, L0599: 69, S0360: | 67, H0672: 63, S0328: | 56, S0374: | 7: 47, L0767: | 47, L0744: 45, H0555: | 44, H0486: 43, H0581: | ): 29, L0536: | 5: 28, L0659: | 3: 26, L0378: | 24, L.0546: 24, L.0743: | 5: 23, L0768: | 23, H0264: 21, H0231: | 5: 18, H0659: | 7: 17, H0063: | 16, S0330: 16, H0657: | 5: 15, S0354: | 7: 15, L0762: | 2: 13, L0776: | H0421: 12, L0379: | 11, S0446: 11, L0600: | 3: 10, L0748: | 10, H0595: 10, L0372: | 9, L0648: 9, H0663: 8, |
| L0766: 1, H0690: | H0539: 1, H0696: 1 | H0555: 1, L0439: 1 | L0779: 1               | S0358: 2           | 131, S037               | 93, H0445             | 87, L0599             | 67, H0672             | 63, S0116  | 55, H0597     | 47, L0744             | 44, H0486             | 35, H0040     | 29, L0535     | 26, H0658     | 24, 1.0546              | 24, H0255     | 23, H026              | 20, H0085     | 18, L0607:    | 16, S0330             | 15, L0785     | 15, H0647     | 15, S0372     | 13, H042]         | 11, S0446             | 11, L0663     | 10, H059              | 9, L0648:              |
|                  |                    | ٠                  |                        | :                  |                         |                       |                       |                       |            |               |                       |                       |               |               |               |                         |               |                       |               |               |                       |               | ,             |               |                   | ÷                     |               |                       |                        |
|                  |                    |                    |                        |                    |                         |                       |                       |                       |            |               |                       |                       |               |               |               |                         |               |                       |               | -             |                       |               |               |               |                   |                       |               |                       |                        |
|                  | ٠.                 |                    |                        | 2296               |                         |                       |                       |                       |            |               |                       |                       |               |               |               |                         |               |                       |               |               |                       |               |               |               |                   |                       |               |                       |                        |
|                  |                    |                    |                        | 2-7                |                         |                       |                       |                       |            |               |                       |                       |               |               |               |                         |               |                       |               | •             |                       |               | •             |               |                   |                       |               |                       |                        |
|                  |                    |                    |                        | 121                | •                       |                       |                       |                       |            |               |                       |                       |               |               |               |                         |               |                       |               |               |                       |               |               |               |                   |                       |               |                       |                        |
|                  |                    |                    |                        | 940639             | •                       |                       |                       |                       |            |               |                       |                       |               |               |               |                         |               |                       |               | • .           |                       |               |               |               |                   |                       | ,             |                       |                        |
|                  |                    |                    |                        | HRACW30            |                         |                       |                       |                       |            |               |                       |                       |               |               |               |                         | ,             |                       |               |               |                       |               |               |               |                   |                       |               |                       |                        |

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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
| H0156: 8, H0108: 8, | H0039: 8, H0622: 8, | L0775: 8, L0375: 8, | S0430: 7, H0254: 7, | H0252: 7, H0090: 7, | H0272: 7, L0655: 7, | L0538: 7, L0754: 7, | H0444: 7, H0004: 6, | H0234: 6, H0188: 6, | H0488: 6, L0523: 6, | L0664: 6, H0656: 5, | L0808: 5, H0662: 5, | H0274: 5, H0251: 5, | H0235: 5, L0646: 5, | L0662: 5, L0526: 5, | S0462: 5, H0677: 5, | S0384: 5, H0664: 4, | H0590: 4, H0591: 4, | H0634: 4, H0646: 4, | L0763: 4, L0770: 4, | S0380: 4, S0432: 4, | L0581: 4, H0650: 3, | S0356: 3, S0408: 3, | H0042: 3, L0774: 3, | L0547: 3, L0783: 3, | H0684: 3, S0404: 3, | L0777: 3, S0434: 3, | H0671: 2, S0442: 2, | S0444: 2, H0489: 2, | H0485: 2, H0427: 2, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| H0575: 2, H0037: 2, H0042.2, H0032.2, H0032.2, H0050.2, H0032.2, H0050.2, H0032.2, H0050.2, H0068: 2, S0382.2, S0464: 2, H0538: 2, L0367: 2, L0637: 1, L0760: 1, H0043: 1, H0025: 1, H0025: 1, H0026: 1, H0036: 1, H0036: 1, H0036: 1, H0036: 1, H0036: 1, H0036: 1, H0037: 1, H0039:                |                 |                |               | :               |                 | •               |                 |                 |                 |                 |                 |              |               |               |               |          |               |               |     |               |               |      |     |     |               | •              |               | -             |               |
|--|---------------|-----------------|----------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|---------------|---------------|----------|---------------|---------------|-----|---------------|---------------|------|-----|-----|---------------|----------------|---------------|---------------|---------------|
| H0575: 2, H0037: 2, H0030: 2, H0032: 2, H0030: 2, H0032: 2, H0030: 2, H0035: 2, H0030: 2, H0035: 2, H0036: 2, H0038: 2, L0369: 2, L0637: 2, L0369: 2, L0637: 2, L0369: 2, L0657: 2, L0369: 2, L0665: 2, L06665: 2, L066665: 2, L066665: 2, L066665: 2, L066665: 2, L06666665: 2, L0666665: 2, L0666666666666666666666666666666666666                   |               |                 | <u>.</u>       |               | <u>.</u>        |                 |                 |                 |                 | <u></u>         |                 |                 |              |               |               |               |          |               |               |     |               |               |      |     |     |               |                |               |               |               |
| H0575: 2, H00307: 2, H00204: 2, H00232: 2, H00204: 2, H002132: 2, L0627: 2 | 2,            | ~               | . ~            | -,            | <u></u>         |                 |                 |                 |                 |                 |                 |                 | 2: 2,        | 1,            |               |               | 1,       |               |               |     |               |               | 1,   |     | 1,  |               | 1,             | ·<br>-        |               |               |
| H00<br>H00<br>H00<br>H00<br>H00<br>H00<br>H00<br>H00   | 75: 2, H0037: | 71: 2, H0204: 2 | 32: 2, H0050:  | 15: 2, H0271: | 68: 2, S0382: 2 | 54: 2, H0538: 2 | 69: 2, L0627: 2 | 87: 2, L0633: 2 | 57: 2, L0518: 2 | 66: 2, L0665: 2 | 78: 2, L0758: 2 | 43: 2, S0458: 2 | XWN: 2, H035 | 86: 1, H0583: | 60: 1, H0125: | 76: 1, H0619: | <u> </u> | 35: 1, L0021: | 25: 1, H0120: |     | 54: 1, H0086: | 45: 1, H0350: |      |     | ^   | 13: 1, H0376: | :77: 1, H0487: | 59: 1, T0004: | 96: 1, S0352: | 70: 1, H0641: |
|  | H05           | 100 <u>T</u>    | H02            | H00           | 00H             | S04             | <u> </u>        | 103             | 907             | <u>1.06</u>     | 803,            | H03             | <u>N5</u>    | H01           | 107           | 90H           | H05      | 90H           | 00H           | 201 | 00H           | 00H           | 100H | H03 | H01 | HO1           | HOA            | )OH           | H03           | 803           |
|  |               |                 |                |               | :               |                 | ,               |                 |                 |                 |                 |                 |              |               |               |               |          |               |               |     |               |               |      |     |     |               | ,              |               |               |               |
|  |               |                 |                |               |                 | *               | <del></del>     | • •             |                 |                 |                 |                 |              |               |               |               |          |               |               |     |               |               |      |     |     |               |                |               |               |               |
|  |               |                 |                |               |                 |                 |                 |                 |                 |                 |                 |                 |              |               |               |               |          |               |               |     |               |               |      |     |     |               |                |               |               |               |
|  |               |                 | <del>.</del> . |               |                 |                 |                 |                 |                 |                 |                 |                 |              |               |               |               |          |               |               |     |               |               |      |     |     |               |                |               |               |               |
|  | -             |                 |                |               |                 |                 |                 |                 |                 |                 |                 |                 |              |               |               |               | ٠        |               |               |     |               |               |      |     |     |               |                |               |               |               |
|  |               |                 |                |               |                 |                 |                 |                 |                 |                 |                 | •               |              |               |               |               |          |               | _             |     | _             |               |      |     |     |               |                |               |               |               |

|                     |                     |                     | • • •               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | <del>,</del>      | ₹                     | ~                                      |                               |                              | <u>_</u>            |   |   |                        |                     |                     |                     |                                       |   |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-------------------|-----------------------|--|-------------------------------|------------------------------|---------------------|---|---|------------------------|---------------------|---------------------|---------------------|---------------------------------------|---|
|                     |                     |                     |                     |                     |                     | _                   |                     |                     | •                   |                     |                     | ۰,۰                 |                     |                     |                        | 118504            | 118504,               | 131242,                                | 256540,                       | 600281                       | 600281              | 602235                                  |   |                        |                     |                     |                     |                                       |   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 20q13.1-          | 13.3                  |  |                               |                              |                     |   |   |                        |                     |                     |                     |                                       |   |
| S0472: 1, H0652: 1, | S0326: 1, H0517: 1, | L0764: 1, L0765: 1, | L0773: 1, L0766: 1, | L0499: 1, L0376: 1, | L0806: 1, L0527: 1, | L0517: 1, L0542: 1, | L0384: 1, L0529: 1, | H0666: 1, H0579: 1, | S0350: 1, H0134: 1, | H0214: 1, S0406: 1, | H0576: 1, H0478: 1, | S0322: 1, L0747: 1, | L0779: 1, L0780: 1, | L0755: 1, S0394: 1, | S0011: 1 and S0456: 1. | AR053: 15, AR089: | 14, AR033: 10, AR039: | Arg-110 to Asp-115,9, AR096: 9, AR060: | 9, AR055: 8, AR104:           |                              | H0415: 1, H0438: 1, | Lys-286 to Gly-295, H0486: 1, H0581: 1, | Thr-315 to Gly-325, S0250: 1, H0616: 1, | H0494: 1 and L0659: 1. |                     |                     |                     | Glu-181 to Pro-189, AR052: 12, AR055: | Lys-211 to Arg-217. 11, AR053: 10, AR089: |
|                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | · •                 |                     |                        | Thr-1 to Pro-6,   | Pro-57 to Thr-63,     | Arg-110 to Asp-115,                    | Lys-147 to Pro-152, 9, AR055: | Met-221 to Cys-228,7, AR061: | Tyr-254 to Cys-261, | Lys-286 to Gly-295,                     | Thr-315 to Gly-325,                     | Ala-351 to Ser-356,    | Ile-380 to Gln-387, | Gly-409 to Arg-419, | Val-421 to Val-428. | Glu-181 to Pro-189,                   | Lys-211 to Arg-217.                       |
| <u>.</u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2297              |                       |  |                               |                              |                     |   |   |                        |                     |                     |                     | 2298                                  |   |
|                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 3 - 1502          |                       |  |                               |                              |                     |   |   |                        | •                   |                     |                     | 2-670                                 |   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                        | 122               |                       |  |                               |                              |                     |   |   |                        |                     |                     |                     | 123                                   | ·   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 941969            |                       |  |                               |                              |                     |   |   |                        |                     |                     |                     | 942511                                | -1  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HOFOC32           |                       |  |                               |                              |                     |   | ,                                       |                        |                     |                     |                     | HTTDM15                               |   |

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|---|---|---|--|--|---|-------------------------|---|---|--|---|
|   |   |   |  |  |   |                         | · |   |  |   |
| 9, AR033: 8, AR096:<br>8, AR060: 8, AR061:<br>7, AR104: 5, AR039: | L0748: 4, H0441: 2,<br>H0333: 2, H0670: 2,<br>H0660: 2, L0439: 2, | 50218: 1, H0650: 1,<br>H0656: 1, H0254: 1,<br>H0255: 1, H0013: 1, | H0327: 1, H0266: 1,<br>H0070: 1, H0040: 1,<br>T0042: 1 T.0809: 1 | L0790: 1, L0792: 1,<br>H0689: 1, H0435: 1, | H0134: 1, L0741: 1,<br>L0759: 1 and S0042: 1. | 13, AR104:<br>6, AR089: |   | ARU33: 4, ARU01: 3<br>H0428: 3, H0545: 1<br>and L0754: 1. | AR089: 19, AR096:<br>18, AR039: 11, AR053: | 7, AR060: 6, AR055:<br>2, AR033: 1, AR061:<br>1, AR104: 1, AR052: |
|   |   |   |  |  |   | Lys-30 to His-47.       |   |   | Trp-2 to Ile-8,<br>Cys-31 to Asp-39,       | Glu-54 to Ser-61,<br>Gln-63 to Lys-70,<br>Arg-79 to Arg-85,       |
|   |   |   |  |  |   | 2299                    |   |   | 2300                                       |   |
|   |   |   |  | e e  |   | 589 - 449               |   |   | 597 - 2024                                 |   |
|   |   | .,  |  |  |   | 124                     |   |   | 125  |   |
|   |   |   |  |  |   | 944031                  |   |   | 946502                                     |   |
|   |   | ·   |  | •  |   | HOVAY63                 |   |   | HDPFY41                                    |   |

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| 0                   | L0439: 4, L0756: 4, | H0616: 3, L0766: 3, | L0803: 3, L0777: 3, | Phe-205 to Asp-234, H0662: 2, H0428: 2, | L0665: 2, H0547: 2, |                     |                     | S6024: 1, S0114: 1, | H0661: 1, S0356: 1, | L0717: 1, H0409: 1, | H0486: 1, S0003: 1, | H0615: 1, S0036: 1, | H0163: 1, S0426: 1, | L0662: 1, L0649: 1, | L0650: 1, L0375: 1, | L0806: 1, L0655: 1, | L0661: 1, L0659: 1, | L0791: 1, L0792: 1, | L0666: 1, H0144: 1, | H0658: 1, H0672: 1, | S0152: 1, H0521: 1, | L0754: 1, L0759: 1, | L0591: 1, S0011: 1 and | H0008: 1. | H0670: 2          | H0318: 1, H0150: 1 | and L0385: 1. | H0622: 2, H0422: 2, | S0358: 1, H0497: 1, |
| Ser-134 to His-143, | Asn-145 to Thr-150, | Ser-155 to Thr-168, | Asp-198 to His-203, | Phe-205 to Asp-234,                     | Pro-238 to Asn-252, | Phe-260 to Val-281, | Pro-292 to Leu-314, | Thr-317 to Ala-322, | Lys-335 to His-342. | ٠.                  |                     |                     |                     |                     | ,                   |                     | -                   |                     |                     |                     |                     |                     |                        |           | Tyr-37 to Ser-47. | His-1 to Phe-8.    |               | Met-1 to Leu-7,     | Ile-21 to Gln-33,   |
|                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2301              | 2302               |               | 2303                |                     |
|                     | -                   |                     |                     |   |                     |                     |                     |                     |                     |                     |                     | -                   |                     | -                   |                     |                     | -                   |                     |                     |                     |                     |                     |                        |           | 99 - 260          | 171 - 389          |               | 3 - 1343            |                     |
|                     |                     |                     | -                   |   |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 126               | 127                |               | 128                 |                     |
| ,                   |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 948608            | 948708             |               | 948719              |                     |
|                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HCOPB92           | HBJHO83            |               | HWME044             |                     |

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| H0039: 1, H0056: 1,<br>L0662: 1, H0666: 1,<br>L0596: 1 and S0242: 1.   | AR039: 36, AR052:<br>33, AR053: 19, AR104:<br>18, AR096: 17, AR033:<br>15, AR089: 13, AR061:<br>11, AR055: 11, AR060: | L0749: 3, L0757; 3,<br>H0169: 2, L0769: 2,<br>L0805: 2, L0754: 2,<br>L0759: 2, H0685: 1,<br>S0282: 1, L0717: 1,<br>H0428: 1, H0068: 1,<br>S0422: 1, L0648: 1,<br>L0521: 1, L0794: 1, | L0803: 1, L0776: 1,<br>L0656: 1, L0809: 1,<br>L0790: 1, L0665: 1,<br>S0148: 1, L0438: 1,<br>H0659: 1, H0648: 1,<br>L0748: 1, L0747: 1, |
| Pro-48 to Glu-53,<br>His-66 to Asn-71,<br>Asp-107 to Glu-118,<br>Val-122 to Leu-133,<br>Gly-185 to Gly-194,<br>Thr-249 to Ser-258,<br>Lys-310 to Lys-328,<br>Arg-367 to Phe-375,<br>Ser-377 to Ala-382,<br>Gln-389 to Trp-395. |   |  |  |
| · v  | 2304  |  |  |
|  | 1 - 240   |  |  |
|  | 129   |  |  |
|  | 949001  |  |  |
|  | HFXJA96   |  |  |

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|--|---|----------------------------|----------------------|---------------------|---------------------|------------------------|------------|---|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|----------------------|
|  |   |                            |                      |                     |                     |                        |            |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                        |                      |
| L0750: 1, L0752: 1,<br>H0543: 1 and S0412: 1 | AR061: 4, AR096: 3,<br>AR089: 3, AR055: 3,<br>AR060: 2, AR104: 2, | 2, AR033:                  | H0555: 2, S0040: 1,  | S0444: 1, H0619: 1, | H0618: 1, H0620: 1, | HU284: 1 and HU095: 1. | 5, AR096:  |   |   | S0007: 3, L0758: 3, | S0382: 2, L0805: 2, | L0776: 2, H0666: 2, | L0748: 2, S6024: 1, | H0341: 1, H0331: 1, | H0628: 1, H0038: 1, | S0002: 1, L0770: 1, | L0662: 1, L0766: 1, | L0522: 1, L0659: 1, | L0663: 1, H0519: 1, | H0659: 1, L0602: 1, | L0754: 1, L0749: 1, | L0779: 1 and L0731: 1. | AR060: 10, AR055: 6, |
|  | Tyr-10 to Gly-19,<br>Pro-55 to Lys-72,<br>Glu-89 to Ala-95,       | Asp-107 to Gly-113, AR039: | Aig-140 to 1111-147. |                     |                     |                        |            | - |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                        | Phe-25 to Lys-31,    |
|  | 2305  |                            |                      |                     |                     | 2306                   | 2          |   |   |                     |                     |                     |                     | . •                 |                     |                     |                     |                     |                     |                     |                     |                        | 2307                 |
|  | 3 - 758   | •                          |                      |                     | •                   | 1014 207               | 177 - 1771 |   | ٠ |                     | •                   |                     | .**                 |                     |                     |                     |                     |                     | •                   |                     |                     |                        | 3 - 536              |
|  | 130   |                            | •                    |                     |                     | 131                    | 101        |   |   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 132                  |
|  | 949574  |                            |                      |                     |                     | 050057                 | 107000     |   |   |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        | 950475               |
|  | HTLGV19   |                            |                      |                     | ٠                   | UMCACIS                | orought.   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HAPRB43              |

|                   | _                          | ,                          |                  |                    |                     |                     | <del></del>        |  |                  |                  |                  |                  |                  |                  |                  |                     |                     |                  |                   |                  |                  | ,                |                      | •                   |                  |                  |                  |                  |                  |
|-------------------|----------------------------|----------------------------|------------------|--------------------|---------------------|---------------------|--------------------|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------|---------------------|------------------|-------------------|------------------|------------------|------------------|----------------------|---------------------|------------------|------------------|------------------|------------------|------------------|
|                   |                            |                            |                  |                    |                     |                     |                    | <u>.                                    </u> |                  |                  |                  |                  | ••               |                  | 1                |                     |                     | -                |                   |                  |                  |                  | -                    | <u> </u>            | <del></del>      |                  |                  |                  |                  |
| 61: 5,            | 33: 3,                     | 52: 3,                     | 53: 3            | 3.4,               | 2,                  | .2                  | .2.                | .1,  | : 1,             | . 1,             | .1,              | .1,              | .1,              | .1,              | . 1,             | 1,                  | 506: 1.             | 89: 3,           | 60: 2,            | 61: 1,           | 96: 1,           | 52: 0            | 17: 8,               | 2,                  | . 1,             | 1,               | : 1,             | : 1,             | : 1,             |
| AR096: 6, AR061:  |                            |                            | AR039: 3, AR053: | L0595: 7, L0803: 4 | .0599: 4, S0356: 2, | 10652: 2, L0771: 2, | .0756: 2, L0779: 2 | S0376: 1, H0486:                             | H0013: 1, H0575: | H0024: 1, H0356: | H0328: 1, L0369: | .0642: 1, L0794: | .0804: 1, L0809: | .0663: 1, L0665: | H0670: 1, H0648: | S0330: 1, L0752: 1, | S0434: 1 and H0506: | AR055: 3, AR089: | AR053: 2, AR060:  | AR039: 2, AR061: | AR033: 1, AR096: | AR104: 1, AR052: | S0358: 13, H0617: 8, | S0444: 4, S0408: 2, | S0374: 2, H0484: | S0376: 1, S0360: | S0410: 1, H0618: | H0231: 1, H0615: | S0368: 1, H0606: |
|                   | Tyr-122 to Asp-131, AR089: | Lys-137 to Leu-144. AR104: | AR               | <u> </u>           | TOS                 | )H0                 | 107                | 803  | )OH              | <u>H0</u>        | H03              | 907              | <u>70</u>        | 90 <u>7</u>      | HO               | 803                 | S04                 |                  |                   | AR               | AR               | AR               | - SO                 | <u>S08</u>          | 803              | 803              | S04              | 70H              | 803              |
| Pro-60 to Lys-82, | Tyr-122 to                 | Lys-137 to                 |                  |                    |                     |                     |                    |  |                  |                  |                  |                  |                  |                  |                  |                     | ,                   | Gln-7 to Lys-23, | Gln-49 to Glu-54. |                  |                  |                  |                      |                     |                  |                  |                  |                  |                  |
|                   |                            |                            |                  |                    |                     |                     |                    |  |                  |                  |                  |                  |                  |                  |                  |                     |                     | 2308             | 1                 |                  |                  |                  |                      |                     |                  |                  |                  |                  |                  |
|                   |                            |                            |                  |                    |                     |                     |                    | •  |                  |                  | •                |                  |                  |                  |                  |                     |                     | 199 - 17         |                   |                  |                  |                  |                      |                     |                  |                  |                  |                  |                  |
|                   |                            |                            |                  |                    |                     |                     |                    |  |                  |                  |                  |                  |                  |                  |                  |                     |                     | 133              |                   |                  |                  |                  |                      |                     |                  |                  |                  |                  | i                |
|                   |                            |                            |                  |                    |                     |                     |                    |  | -                |                  |                  |                  |                  |                  |                  |                     |                     | 956895           |                   |                  |                  |                  |                      |                     |                  |                  |                  |                  |                  |
|                   |                            |                            |                  |                    |                     |                     |                    |  |                  |                  |                  |                  |                  | •                |                  |                     |                     | HCCMD55          |                   |                  |                  |                  |                      |                     |                  |                  |                  |                  |                  |

|  |                   | 263700,<br>601969,                             | 601969                |                       |                     |                     |                     |                                      | <del></del>                          | ,                   |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |
|--|-------------------|--|-----------------------|-----------------------|---------------------|---------------------|---------------------|--------------------------------------|--------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |                   | 10q25.3-<br>q26.2                              |                       |                       |                     | -                   |                     | ٠.                                   |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| S0438: 1, H0647: 1,<br>L0762: 1, L0772: 1,<br>L0764: 1, L0376: 1,<br>L0493: 1, L0783: 1,<br>L0530: 1, H0659: 1,<br>H0670: 1, H0648: 1, |                   | L0747: 24, L0754: 18,<br>H0309: 12, H0545: 12, | H0031: 12, L0439: 11, | H0428: 10, L0755: 10, | H0251: 9, S0126: 9, | L0744: 8, L0757: 8, | L0588: 8, S0360: 7, | S0010: 7, S0051: 7,                  | H0252: 7, H0135: 7,                  | L0361: 7, S0212: 6, | H0544: 6, H0687: 6, | H0494: 6, L0438: 6, | H0658: 6, L0748: 6, | L0752: 6, L0591: 6, | H0662: 5, L0731: 5, | L0759: 5, S0192: 5, | S0040: 4, S0222: 4, | H0081: 4, H0024: 4, | H0644: 4, H0124: 4, | H0551: 4, L0662: 4, | L0659: 4, L0565: 4, | L0751: 4, L0750: 4, |
|  | Leu-28 to Phe-35. | Ala-3 to Gly-12,<br>Gly-23 to Ser-46,          |                       |                       |                     | Gly-190 to Tyr-206, | Lys-280 to Lys-285, | Arg-347 to Asp-352, 80010: 7, 80051: | Glu-403 to Lys-410, H0252: 7, H0135: | Ser-430 to Phe-442. |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |
|  | 2309              | 2310   |                       |                       |                     |                     |                     |                                      |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 108 - 1           | 1 - 1551                                       |                       |                       |                     |                     |                     |                                      |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 134               | 135  |                       |                       |                     |                     |                     |                                      |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
|  | 958219            | 859096   |                       |                       |                     |                     |                     |                                      |                                      |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
|  | HKBAL08           | HKADF15  |                       |                       |                     |                     | ,                   |                                      |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|  |                     |                     |  | •                   |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|--|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0599; 4, S0194; 4,<br>H0486; 3, H0013; 3, | H0316: 3, H0163: 3, | L0770: 3, L0768: 3, | L0775: 3, L0809: 3,<br>H0670: 3, H0672: 3, | L0603: 3, S0356: 2, | S0358: 2, S0046: 2, | H0455: 2, H0586: 2, | H0587: 2, H0575: 2, | H0318: 2, H0123: 2, | H0012: 2, H0188: 2, | S0250: 2, S0003: 2, | S0214: 2, T0023: 2, | H0553: 2, T0067: 2, | L0351: 2, L0763: 2, | L0771: 2, L0774: 2, | L0651: 2, L0783: 2, | L0666: 2, H0689: 2, | H0660: 2, H0651: 2, | S0330: 2, S0378: 2, | S0206: 2, L0749: 2, | S0031: 2, L0590: 2, | L0601: 2, H0624: 1, | S0342: 1, S0180: 1, | S0400: 1, L0005: 1, | S0376: 1, H0619: 1, | H0645: 1, S0300: 1, | L0717: 1, H0406: 1, |
|  |                     | :                   |  |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ···                 |                     |                     |                     |                     |                     |                     |                     |
|  |                     |                     |  |                     |                     |                     |                     | ·<br>·              |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                     | ·<br>-              |  |                     |                     |                     |                     |                     |                     |                     |                     | <del>-</del>        |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     | <del></del>         |                     |
|  | ·                   |                     | ,  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|            | _                |                  |                  |               |          |                  |          |                  | <u> </u>   |             |          |          |          |          |          |          |           |             |             |                  |             |                  |  |                  |           |          |          |           |              |
|------------|------------------|------------------|------------------|---------------|----------|------------------|----------|------------------|------------|-------------|----------|----------|----------|----------|----------|----------|-----------|-------------|-------------|------------------|-------------|------------------|--|------------------|-----------|----------|----------|-----------|--------------|
|            |                  |                  |                  |               |          |                  | ٠        |                  | ÷          |             |          |          |          |          |          |          |           |             |             |                  |             |                  |  |                  |           |          |          |           |              |
|            |                  | ·                |                  | <del></del> - |          |                  |          | <u></u>          |            |             |          |          |          |          |          |          |           | <del></del> |             |                  |             |                  |  | -                |           |          |          |           | $\dashv$     |
|            |                  |                  |                  |               |          |                  |          |                  |            |             |          |          |          |          |          |          |           |             |             |                  |             |                  |  |                  |           |          |          |           | •            |
| •          | <u></u>          |                  |                  |               | _        |                  |          |                  |            |             |          |          |          |          |          |          |           | •           |             |                  | •           |                  |  |                  |           |          |          |           | <del>.</del> |
| , H0261: 1 | 014: 1,          | 441: 1,          | )432: 1          | .H0592: 1     | T0039: 1 | 156: 1           | H0098: 1 | 346: 1,          | , H0196: 1 | 1, L0738: 1 | H0546: 1 | L0041: 1 | H0566: 1 | H0049: 1 | H0373: 1 | S0388: 1 | H0355: 1  | , H0266: 1  | 1, H0028: 1 | 142: 1           | , H0032: 1  | 038: 1,          | S0448: 1,                                | 0647: 1          | L0640: 1  | L0500: 1 | L0372: 1 | L0773: 1  | L0650: 1     |
| : 1, HC    | H0550: 1, S6014: | S0220: 1, H0441: | H0431: 1, H0432: |               |          | H0427: 1, H0156: | Ţ,       | H0706: 1, S0346: | _          | i: 1, LC    | ÷        | Ξ,       | 1,       | <u> </u> | <u>_</u> | 1        |           | ): 1, H(    | : 1, HC     | H0039: 1, L0142: | 5: 1, H(    | S0366: 1, S0038: | F. 1, SO                                 | H0509: 1, H0647: | ): 1, LC  |          |          |           | 1,           |
| H0437: 1   | H0550            | S0220            | H0431            | H0370:        | H0632:   | H0427            | 10021:   | H0706            | S0049:     | H0235:      | H0327:   | H0046:   | H0172:   | H0050:   | H0620:   | H0051:   | T0010: 1  | H0510: 1    | S0318: 1    | H0035            | H0606: 1    | 80366            | 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1 | H0509            | L0369: 1, | L0631: 1 | L0769: 1 | L0641: 1, | L0648:       |
|            |                  |                  |                  |               |          |                  |          |                  |            |             |          |          |          |          |          |          |           |             |             |                  |             |                  |  |                  |           |          |          |           |              |
|            |                  |                  |                  | . ,           |          |                  |          |                  |            |             |          |          |          |          |          |          |           |             |             |                  |             |                  |  |                  |           |          |          |           |              |
|            |                  |                  |                  |               |          |                  |          |                  |            |             |          |          |          |          |          |          |           |             |             |                  |             |                  |  |                  |           |          |          | •         |              |
|            |                  |                  |                  |               |          |                  |          |                  |            |             |          |          |          |          |          |          | <u></u> . |             |             |                  |             |                  |  |                  |           |          |          | ,         |              |
| -          |                  |                  |                  |               |          |                  |          | -                |            |             |          |          |          |          |          | •        |           |             |             |                  | <del></del> |                  |  | •                |           |          |          | <u></u>   |              |
|            |                  |                  |                  | •             |          |                  |          |                  | ٠          |             |          |          |          |          |          |          |           |             |             |                  |             |                  |  |                  |           |          |          |           |              |
|            |                  |                  |                  |               |          |                  | ٠.       |                  |            |             |          |          |          |          |          |          |           |             |             |                  |             |                  |  |                  |           | •        |          |           |              |
| -          |                  |                  |                  |               |          |                  | -        |                  |            |             |          |          |          |          | ,<br>    |          |           |             |             |                  |             |                  | _  |                  |           |          |          |           |              |
|            |                  |                  |                  |               |          |                  |          |                  |            |             |          |          |          |          |          |          |           |             | •           |                  |             |                  |  |                  |           |          |          |           |              |
| _          |                  |                  |                  |               |          |                  |          |                  |            |             |          |          |          |          |          |          |           |             |             |                  |             |                  |  | -                |           |          |          |           |              |
|            |                  |                  |                  |               |          |                  |          |                  |            |             |          |          |          |          |          |          |           |             | •           |                  | •           |                  |  |                  |           |          |          |           |              |
|            |                  |                  |                  |               |          |                  |          |                  |            |             |          |          |          |          |          |          |           |             |             |                  |             |                  |  |                  |           |          |          |           |              |

|  | ·  | ·   |
|--|--|---|
| L0806: 1, L0655: 1,<br>L0657: 1, L0547: 1,<br>L0647: 1, L0788: 1,<br>L0793: 1, L0663: 1,<br>L0664: 1, H0693: 1,<br>H0648: 1, H0704: 1,<br>H0555: 1, S0027: 1,<br>S3014: 1, S0028: 1,<br>L0743: 1, L0740: 1,<br>L0779: 1, L0780: 1,<br>S0260: 1, H0343: 1,<br>L0605: 1, L0366: 1,<br>H0653: 1, H0667: 1,<br>L0096: 1, S0196: 1 and<br>H0506: 1. | L0803: 4, L0663: 3,<br>S0420: 2, L0666: 2,<br>H0435: 2, L0748: 2,<br>L0777: 2, S0116: 1,<br>S0132: 1, H0370: 1,<br>L0021: 1, S0422: 1,<br>L0664: 1, H0658: 1,<br>S0328: 1, L0749: 1,<br>S0436: 1 and L0097: 1. | L0777: 3, L0754: 2,<br>H0689: 1, H0660: 1 and<br>L0755: 1.  |
|  | Ser-14 to Ser-23,<br>His-30 to Ser-45,<br>Gly-55 to Arg-67,<br>Leu-71 to Leu-76,<br>Leu-97 to Glu-102,<br>Ser-118 to Pro-129,<br>Pro-159 to Ala-179,<br>Leu-189 to Ser-204.                                    | Asn-4 to Lys-9, Arg-37 to Pro-42, Pro-79 to Ile-91, Asp-144 to Trp-155, Asp-189 to Gln-194, Ser-199 to Ser-204, |
|  | 2311   | 2312  |
|  | 107 - 1483   | 135 - 1028  |
|  | 136  | 137   |
|  | 961337   | 961458  |
|  | HOGESS5  | HKZAJ14   |

|                     |                     |                     | -                   |                     |                     |                        | -                 |                   |                   | 102770,             | 188540,                | 600234,   | 601414 | 601691, | 601691, | 601691, | 601691, | 601718, | 602094 |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-------------------|-------------------|-------------------|---------------------|------------------------|-----------|--------|---------|---------|---------|---------|---------|--------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                        |                   |                   |                   | 1p12-p13 1          |                        | 9         |        | 9       | 9       | 9       | Φ.      | 9       | 9      |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     | •                   |                     | •                   | L0748: 2, L0749: 2, | H0024: 1 and H0051: 1. |                   |                   |                   | H0449: 1, H0393: 1, | H0691: 1, H0547: 1 and | H0711: 1. |        |         |         |         |         |         |        | L0774: 3, L0809: 2, | H0483: 1, H0306: 1, | H0599: 1, H0618: 1, | H0083: 1, H0644: 1, | H0617: 1, H0606: 1, | H0087: 1, L0369: 1, | L0763: 1, L0643: 1, | L0662: 1, L0794: 1, | L0804: 1, L0790: 1, |
| Leu-208 to Asn-214, | Leu-225 to Leu-230, | Thr-234 to Lys-245, | Asn-251 to Leu-260, | Glu-285 to Asp-290. |                     |                        | Pro-15 to Arg-20, | Leu-31 to Asp-36, | Gly-50 to Glu-65, | Ser-1 to Glv-9.     |                        |           |        |         |         |         |         |         |        |                     |                     |                     |                     |                     |                     |                     | -                   |                     |
|                     |                     |                     |                     |                     | 2313                |                        | 2314              |                   |                   | 2315                |                        | -         |        |         |         |         |         |         |        | 2316                |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | 1915 -              | 1826                   | 2 - 346           |                   |                   | 2 - 1660            |                        |           |        |         |         |         |         |         |        | 716 - 339           |                     | ·                   |                     |                     | ,                   |                     | •                   |                     |
|                     |                     |                     |                     |                     | 138                 |                        | 139               |                   |                   | 140                 | 1                      |           |        |         |         |         |         |         |        | 141                 |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | •                   | 962362              |                        | 965190            |                   |                   | 965372              |                        |           |        |         |         |         |         |         |        | 967634              |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | HLHAE14             |                        | HBCJN16           |                   |                   | HCGAF29             |                        |           |        | •       |         | ·       |         |         |        | HAHEF81             |                     |                     |                     |                     |                     |                     |                     | ,                   |

|  | 121050,<br>131400,<br>153455,<br>159000,<br>179095,<br>180071,<br>181460,<br>192974,<br>600807,<br>601596,<br>602089 |   |
|--|--|---|
|  | 5q23.3-<br>q31.2   |   |
| L0665: 1, H0658: 1,<br>H0696: 1, L0748: 1,<br>L0780: 1 and L0757: 1. |  | AR033: 7, AR104: 7,<br>AR055: 4, AR060: 3,<br>AR096: 3, AR089: 3,<br>AR061: 3, AR053: 2,<br>AR052: 2, AR039: 1                                    |
|  |  | Leu-98 to Cys-107, AR033:<br>Ala-135 to Ala-142, AR055:<br>Pro-233 to Lys-238, AR096:<br>Gin-246 to Ala-257, AR061:<br>Ser-294 to His-302. AR052: |
| -  | 2317   | 2318  |
|  | 2 - 1267   | 2 - 994   |
|  | 142  | 143   |
|  | 967807   | 968171  |
|  | HBJAB02  | HOUCR01   |

|   |                 | 60258,<br>602087   |
|---|-----------------|--|
|   |                 | 2q32.1   |
| L0742: 4, S0007: 3,<br>L0439: 3, S0040: 2,<br>H0009: 2, L0769: 2,<br>L5566: 2, L0764: 2,<br>L0740: 2, L0758: 2,<br>S0110: 1, S0010: 1,<br>H0390: 1, S0049: 1,<br>L0157: 1, H0563: 1,<br>H0570: 1, H0123: 1, | `கிடுகிடுகிகுப் | L0766: 2, L0776: 2,<br>L0438: 2, S0114: 1,<br>S0007: 1, H0393: 1,<br>S0222: 1, H0486: 1,<br>H0009: 1, H0012: 1,<br>H0014: 1, H0083: 1,<br>H0687: 1, S0003: 1,<br>H0628: 1, T0067: 1,<br>H0100: 1, S0344: 1,<br>H0521: 1, S0032: 1,   |
|   | <u> </u>        | Arg-1 to Gly-8, L0766: 2, L0776 Pro-10 to Ser-72, L0438: 2, S0114: Thr-80 to Gln-86, S0007: 1, H0393: Pro-96 to Ala-102, S0222: 1, H0486: Ser-137 to Val-146, H0009: 1, H0012: Leu-207 to Asp-214, H0014: 1, H0083: Gln-219 to Thr-226. H0687: 1, S0003: H0628: 1, T0067: H0100: 1, S0344: H0521: 1, S0032: L0748: 1, L0740: |
|   |                 | 2319   |
|   |                 | 334 - 1011   |
|   |                 | 144  |
|   |                 | 968454   |
|   | •               | HDTIG18  |

|   | က် ဝံ ဝံ ဝံ ဝံ ဝံ ဝံ ဝံ ဝံ ဝံ ဝံ ဝံ ဝံ ဝံ   |   |
|---|---|---|
|   | 106165,<br>110100,<br>117700,<br>117700,<br>150210,<br>169600,<br>180380,<br>180380,<br>203500,<br>276902,<br>601199,<br>601199,  |   |
|   | 3q23-q25  |   |
| L0745: 1, L0746: 1,<br>L0750: 1, L0779: 1,<br>L0752: 1, L0753: 1,<br>L0755: 1, L0757: 1,<br>S0026: 1, S0276: 1 and<br>H0543: 1. | Glu-20 to Lys-33, H0574: 6, L0362: 6, Ser-96 to His-109, H0510: 5, L0666: 5, Asn-147 to Val-166, L0665: 4, S0358: 3, Glu-188 to Ala-194, H0670: 3, H0013: 2, Ala-231 to Lys-240, H0421: 2, H0046: 2, Ala-267 to Lys-283, S0438: 2, L0775: 2, Arg-332 to Thr-338, L0581: 2, H0431: 1, Thr-365 to Tyr-377, H0004: 1, H0014: 1, Glu-406 to Lys-417, S0003: 1, L0456: 1, Arg-462 to Glu-467, S0440: 1, L0664: 1, Leu-595 to Glu-615, L0607: 1, L0664: 1, Phe-667 to Tyr-675, H0593: 1, H0683: 1, Gln-722 to Gly-729, H0658: 1, L0755: 1 and S0276: 1.   | L0747: 5, H0318: 3,<br>H0617: 3, L0749: 3,<br>L0776: 2, H0483: 1,<br>H0615: 1, H0039: 1,<br>L0055: 1, L0769: 1,<br>L0521: 1, L0766: 1,<br>L0375: 1, L0809: 1, |
|   | Glu-20 to Lys-33, H0574: 6, L0362: 6 Ser-96 to His-109, H0510: 5, L0666: 5, Asn-147 to Val-166, L0665: 4, S0358: 3, Glu-188 to Ala-194, H0670: 3, H0013: 2 Ala-231 to Lys-240, H0421: 2, H0046: 2 Ala-267 to Lys-283, S0438: 2, L0775: 2, Arg-332 to Thr-338, L0581: 2, H0431: 1 Thr-365 to Tyr-377, H0004: 1, H0014: 1 Glu-406 to Lys-417, S0003: 1, L0456: 1, Arg-462 to Glu-467, S0440: 1, L0770: 1, Leu-595 to Glu-615, L0607: 1, L0664: 1, Phe-667 to Tyr-675, H0593: 1, H0683: 1 Gln-722 to Gly-729, H0658: 1, L0755: 1 Gln-722 to Gly-729, H0658: 1, L0755: 1 Gln-722 to Gly-729, H0658: 1, L0755: 1 | Pro-16 to Pro-21,<br>Ser-33 to Gly-38.  |
|   | 2320  | 2321  |
|   | 3951 -<br>1765  | 580 - 825   |
|   | 145   | 146   |
|   | 968949  | 969387  |
|   | HBLGD30   | HFIHK04   |

|                     |                     |                        |           |                      |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|------------------------|-----------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                        |           |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |
| H0520: 1, H0689: 1, | H0672: 1, S0152: 1, | L0750: 1, L0608: 1 and | S0194: 1. | .H0615: 6, L0766: 3, | L0779: 2, L0777: 2, | H0556: 1, S0222: 1, | H0438: 1, H0492: 1, | H0013: 1, H0156: 1, | H0052: 1, H0561: 1, | S0440: 1, S0150: 1, | H0538: 1, L0369: 1, | L0371: 1, L0769: 1, | L0805: 1, L0659: 1, | L0647: 1, S0374: 1, | H0518: 1, S0152: 1, | L0740: 1, L0756: 1, | L0755: 1, L0731: 1, | H0445: 1, S0026: 1 and | H0653: 1. | L0439: 6, L0756: 5, | L0779: 5, L0777: 5, | L0759: 5, L0776: 4, | H0620: 3, L0747: 3, | L0755: 3, S0442: 2, | S0358: 2, H0615: 2, | L0770: 2, L0768: 2, | H0144: 2, S0374: 2, | L0748: 2, L0740: 2, | L0745: 2, L0750: 2, |
|                     |                     |                        |           |                      |                     |                     |                     | -                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |                     | ,                   |                     | ٠                   |                     |
|                     |                     |                        |           | 2322                 |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     | -                   |                     |                     |                        |           | 2323                |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        | _         | 864 - 7              |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2 - 1105            |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
|                     |                     | -                      |           | 147                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 148                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        |           | 969841               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 970046              |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        |           | HODIL24              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HE8NQ16             |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |

| r <del></del>    |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  |                    | _         |                  |                   |                     | •                          |                            | _        |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|------------------|----------|---------------|----------|----------|------------------|------------------|------------------|------------------|------------|------------------|--------------------|-----------|------------------|-------------------|---------------------|----------------------------|----------------------------|----------|
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  |                    |           |                  |                   |                     |                            |                            |          |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  | ,                |            |                  |                    |           |                  |                   |                     |                            |                            |          |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  | · · · · · ·        |           |                  |                   |                     |                            |                            | $\dashv$ |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  |                    |           |                  |                   |                     |                            |                            |          |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  |                    |           |                  |                   |                     |                            |                            |          |
|                  | •                | <b>.</b>         | •                | <b>⊶</b> .       | •                | •                | •                | <u>,</u>         | 1,               |           | •                | •        | •             | ÷        | •        |                  | 1,               |                  |                  | _•         |                  | •                  | 5: 1.     | 3: 2,            | <br>2,            | ;;                  | .:<br>1,                   | о<br>::                    |          |
| 34: 1            | 25:1             | 156:             | 52: 1            | 083:             | 587: 1           | 03: 1            | <b>428:</b> 1    | 44.              | 566              | 546: 1    | 762: 1           | L0800: 1 | 794: 1        | L0775: 1 | L0783: 1 | 583: 1           | 648:             | 328: 1           | 380: 1           | , S0044: 1 | 749: ]           | 757: 1             | and L0485 | 2, AR033:        | 2, AR060:         | 2, AR052:           | 1, AR055:                  | , AR104:                   |          |
| 2, S01           | , H0             | 1, H0            | l, H00           | 1, HO            | l, H0(           | 1, 800           | l, H0            | 1, H0            | 1, H0            | 1, H0646: | 1, LO            |          | 1, L0794:     |          |          | 1, HQ            | 1, HO            | 1, SO:           | 1, SO            | 1, SQ      | 1, LO            | 1, LO              |           |                  |                   | 2, A                | 1, A                       | 1, A                       | 5        |
| L0599: 2, S0134: | S0222: 1, H0642: | H0013: 1, H0156: | S0010: 1, H0052: | H0596: 1, H0083: | S6028: 1, H0687: | S0250: 1, S0003: | S0214: 1, H0428: | H0622: 1, H0644: | H0038: 1, H0269: | 70042: 1, | .0369: 1, L0762: | 0796: 1  | .0662: 1      | .0774: 1 | .0659:   | .0793: 1, H0683: | H0435: 1, H0648: | H0672: 1, S0328: | H0539: 1, S0380: | H0696: 1   | H0631: 1, L0749: | .0753: 1, L0757: 1 | S0434: ]  | AR053:           | AR089:            | AR096:              | 2061:                      | 2039:                      | H0415    |
| 2                | <u>S</u> 0       | 丑                | 80               | 요                | S6               | <u>S</u> 0       | SO               | R<br>E           | 丑                | 2         | <u> </u>         | 3        | 3             | 2        | <u> </u> | 3                | 표                | 丑                | <u>H</u>         | 呂          | H                | <u> </u>           | 80        | AF               | AĀ                |                     | 77,AF                      | 1. AF                      | Ŧ        |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  |                    |           | -19,             | /41,              | la-12               | rg-15                      | sp-21                      |          |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  |                    | :         | Gln              | to Gly            | to A                | 1 to A                     | to A                       |          |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  | ·                  |           | Gly-9 to Gln-19, | Pro-36 to Gly-41, | Ala-112 to Ala-123, | Asp-151 to Arg-157, AR061: | Ala-199 to Asp-211. AR039: |          |
| _                |                  |                  |                  |                  | ·                |                  |                  |                  |                  | <u>.</u>  |                  |          | <del></del> , |          |          |                  |                  |                  |                  |            |                  |                    |           |                  | P                 | A                   | Ā                          | ¥                          | _        |
|                  |                  |                  |                  |                  | :                |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  |                    |           | 2324             |                   |                     |                            |                            |          |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  |                    |           | 019              |                   |                     |                            |                            |          |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  |                    | İ         | 27 - 1019        |                   |                     |                            |                            |          |
|                  |                  | ·                |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  | •                |                  |                  |            |                  |                    |           | 49               |                   |                     |                            | ·                          |          |
| _                |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  | _                |                  |                  |            |                  |                    |           | -                |                   |                     |                            |                            | -        |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  | •        |               |          |          |                  |                  |                  |                  |            |                  |                    | ;<br>;    | 973010           |                   |                     |                            |                            |          |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  |                    |           | 973              |                   |                     |                            |                            |          |
| <u> </u>         |                  |                  |                  | -                |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  | -                |                  |                  | •          |                  |                    |           | 34               | -                 |                     |                            |                            | $\dashv$ |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  |                    |           | HOFMS34          |                   |                     |                            |                            |          |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |          |               |          |          |                  |                  |                  |                  |            |                  |                    |           | ЭН               |                   |                     |                            |                            |          |

| -   |           |                     |          |          |                   | Γ                 |                       |     | <br> |              |                    |                       |                       |                       | ·                     |                       |                       |                       |                       |                       |                        |                     |                     |                     |                     | _                   |
|---|-----------|---------------------|----------|----------|-------------------|-------------------|-----------------------|-----|------|--------------|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 180069,<br>180069.                          | 180069,   | 201450,             | 248610,  | 600309,  | 601676,<br>602522 |                   |                       |     |      |              |                    |                       |                       |                       |                       |                       |                       |                       | 27.11                 |                       |                        |                     |                     |                     |                     |                     |
| 6, 1p31<br>5.                               |           |                     | ,        |          |                   |                   |                       | ,   |      |              |                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                        |                     |                     |                     | ,                   |                     |
| AR096: 11, AR089: 6,<br>AR053: 6, AR060: 5. | 5, AR033: | AR039: 3, AR055: 2, | AR061: 1 | H0415: 2 |                   | AR039: 26, AR055: | 18, AR033: 15, AR053: |     |      | <u>&amp;</u> | H0521: 185, H0522: | 75, H0046: 37, S0360: | 25, H0580: 24, H0585: | 22, H0575: 22, L0599: | 21, H0657: 16, H0255: | 15, H0486: 15, L0664: | 15, H0641: 14, S0376: | 12, H0581: 12, L0751: | 12, H0650: 11, H0087: | 10, S0002: 10, H0638: | 9, H0264: 9, H0509: 9, | L0769: 9, H0445: 9, | H0656: 8, S0358: 8, | H0617: 8, L0748: 8, | L0750: 8, L0659: 7, | H0658: 7, H0672: 7, |
| 2325 Pro-70 to Cys-76.                      |           |                     |          |          |                   | His-8 to Gly-18.  |                       | 200 |      |              |                    | -                     |                       |                       |                       |                       |                       |                       |                       |                       |                        |                     |                     |                     |                     | *                   |
| 2325  |           |                     |          |          |                   | 2326              |                       |     |      |              |                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                        |                     |                     |                     |                     |                     |
| 3 - 293                                     |           |                     |          |          |                   | 306 - 812         |                       |     |      |              |                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                        |                     |                     |                     |                     |                     |
| 150   |           |                     | •        |          |                   | 151               |                       |     |      |              |                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                        |                     |                     |                     |                     |                     |
| 973505                                      |           |                     |          |          |                   | 974667            |                       |     | •    |              |                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                        |                     |                     |                     |                     |                     |
| HOFOB11                                     |           |                     |          |          |                   | HTLHN94           |                       |     |      |              |                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                        |                     |                     |                     |                     |                     |

|                    |                     |                    |                     |                     | <del>-</del>        |                  |                    |                    |                     |                     |                     |                      |                    |                    |                  |                 |                     |             |            |          |                     |                    |                     |                  |                     |                     |                     |                     |                  |
|--------------------|---------------------|--------------------|---------------------|---------------------|---------------------|------------------|--------------------|--------------------|---------------------|---------------------|---------------------|----------------------|--------------------|--------------------|------------------|-----------------|---------------------|-------------|------------|----------|---------------------|--------------------|---------------------|------------------|---------------------|---------------------|---------------------|---------------------|------------------|
| <br>               |                     |                    |                     |                     |                     | -                |                    |                    |                     |                     |                     |                      |                    |                    |                  |                 |                     |             |            |          |                     | ٠                  |                     |                  |                     |                     |                     |                     |                  |
|                    |                     |                    |                     | •                   | •                   |                  |                    |                    |                     |                     |                     |                      |                    |                    |                  |                 |                     |             |            |          |                     |                    |                     |                  |                     |                     |                     |                     |                  |
| 7,                 |                     | <u>.</u><br>در     | 5,                  |                     | · <u>··</u>         | <u>.</u><br>م    |                    |                    | <u>_</u>            |                     |                     |                      |                    | 3,                 | 3,               | 3,              | <u>~</u>            |             |            |          | _                   |                    | ~                   | - 2              | ر                   |                     |                     | ~;                  | 2,               |
| H0555:             | H0586: 6            | H0031:             | H0561:              | L0372: 6            | LQ731: (            | L0657: 5         | L0752: 5           | H0550: 4           | L0375: 4            | L0776: 4            | H0648: 4            | L0758: 4             | S0354: 3           | H0069:             | H0597:           | H0090:          | L0662: 3            | L0766: 3,   | L0540: 3,  | L0665: 3 | L0743: 3            | H0265: 2           | H0141: 2            | H0671:           | H0637:              | H0574: 2            | H0156: 2            | H0618:              | H0050: 3         |
| H0134: 7, H0555: 7 | S0031: 7, H0586: 6, | H0318: 6, H0031: 6 | H0040: 6, H0561: 6, | S0344: 6, L0372: 6, | H0682: 6, L0731: 6, | H0560: 5, L0657: | S0328: 5, L0752: 5 | S0116: 4, H0550: 4 | H0036: 4, L0375: 4, | .0806: 4, L0776: 4, | .0666: 4, H0648: 4, | .0755: 4, L.0758: 4, | H0506: 4, S0354: 3 | H0250: 3, H0069: 3 | H0427: 3, H0597: | H0271: 3, H0090 | H0272: 3, L0662: 3, | .0794: 3, I | 0651: 3, I | 0546: 3, | S0330: 3, L0743: 3, | .0362: 3, H0265: 2 | T0002: 2, H0141: 2, | H0341: 2, H0671: | H0402: 2, H0637: 2, | S0132: 2, H0574: 2, | S0280: 2, H0156: 2, | H0042: 2, H0618: 2, | H0309: 2, H0050: |
| 工                  | <u>w</u>            | 正                  | ≖                   | <u>S</u>            | 耳                   | 工                | <u>S</u>           | <u>S</u>           | <u> </u>            | <u> </u>            | <u> </u>            | <u> 7</u>            | <u> </u>           | Œ                  | 프                | 王               | 圧                   | <u> </u>    | ᄀ          | 그        | Š                   | 7                  | Ē                   | <u>E</u>         | 王                   | Š                   | <u>x</u>            | 王                   | 王.               |
|                    | •                   |                    |                     |                     |                     |                  |                    |                    |                     |                     |                     |                      |                    |                    |                  | •               |                     |             |            |          |                     |                    |                     |                  |                     |                     |                     |                     |                  |
|                    |                     |                    |                     |                     |                     |                  |                    |                    |                     |                     | ;                   |                      |                    |                    |                  |                 |                     |             |            |          |                     |                    |                     |                  |                     |                     |                     |                     |                  |
|                    |                     | ··                 |                     | :                   | ,                   |                  |                    |                    | -                   |                     |                     |                      |                    |                    |                  |                 |                     |             |            |          |                     |                    |                     |                  |                     |                     |                     |                     |                  |
|                    |                     |                    |                     |                     |                     |                  |                    |                    |                     |                     |                     |                      |                    |                    |                  |                 |                     |             |            |          |                     |                    |                     |                  |                     |                     |                     |                     |                  |
|                    |                     |                    |                     |                     |                     | ··               |                    |                    | · · <u> </u>        |                     |                     |                      |                    | <u> </u>           |                  |                 | <u></u>             |             |            |          |                     |                    |                     |                  |                     |                     |                     |                     |                  |
|                    | •                   |                    |                     |                     |                     |                  | -                  |                    |                     |                     |                     |                      |                    |                    |                  |                 |                     |             |            | •        |                     |                    |                     |                  |                     |                     |                     | ·                   |                  |
|                    |                     |                    |                     |                     |                     |                  |                    |                    |                     |                     |                     |                      |                    |                    |                  | •               |                     |             |            |          |                     |                    |                     |                  |                     |                     |                     |                     |                  |
|                    | •                   |                    |                     |                     |                     |                  |                    |                    |                     |                     |                     |                      |                    |                    |                  |                 |                     |             |            |          |                     |                    |                     |                  |                     |                     |                     |                     |                  |
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|                     | -                   |                     |                     |                    |                     |                     | -                   |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | <u>-</u>            | _                   |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     | ····               |                     |                     |                     | <u> </u>            |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     | •                   |                     |                     |                     |
|                     |                     |                     |                     |                    |                     |                     |                     |                     | · .                  |                     |                     |                     | ,                   |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0012: 2, H0510: 2, | H0039: 2, H0591: 2, | H0647: 2, H0538: 2, | 10529: 2, L0364: 2, | 0803: 2, L0775: 2, | .0378: 2, L0518: 2, | 30053: 2, H0520: 2, | H0670: 2, H0660: 2, | 30380: 2, S0044: 2, | .0744: 2, L.0777: 2, | .0759: 2, S0260: 2, | H0395: 1, H0584: 1, | 10159: 1, S0114: 1, | .0778: 1, H0254: 1, | H0661: 1, H0664: 1, | H0306: 1, H0306: 1, | H0125: 1, S0356: 1, | 30442: 1, H0676: 1, | H0619: 1, S6022: 1, | H0549: 1, S6016: 1, | H0410: 1, H0537: 1, | H0442: 1, H0587: 1, | T0060: 1, H0190: 1, | H0635: 1, L0021: 1, | H0025: 1, T0082: 1, | H0706: 1, H0274: 1, | S0010: 1, S0182: 1, | H0085: 1, H0263: 1, | H0596: 1, H0086: 1, | H0045: 1, L0471: 1, |
| OH                  | HO                  | OH                  | HO                  | <u>01</u>          | <u>iro</u>          | 200                 | OH.                 | .0S                 | <u>3</u>             | <u>21</u>           | OH.                 | OH                  | <u>3</u>            | OH.                 | OH.                 | <u>H</u>            | OS                  | OH.                 | OH.                 | <u>SH</u>           | OH.                 | <u>10</u>           | OH.                 | OH .                | OH                  | <u> S</u> 0         | OH OH               | OH .                | H                   |
|                     | <del></del>         | <del></del>         | <del></del>         | <del></del>        |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |
|                     |                     | •                   |                     |                    |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                    |                     |                     |                     |                     |                      |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | <u></u>            |                     |                     |                     |                     |                      | •                   |                     |                     |                     | 11.5                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                    |                     |                     |                     |                     |                      |                     |                     | 1                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |

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|------------------|-------|------------------|----------------|------------------|------------------|------------------|------------------|------------------|---------------------|----------------|----------------|------------------|------------------|---------------------|----------------|------------------|------------------|------------------|------------------|---|------------------|------------------|----------------|------------------|------------------|---------------------|------------------|------------------|------------------|
| 1.               | · - í |                  | 1,             | 1,               | 1,               | . ,              | 1,               | J,               | ·1                  | 1,             | 1,             | 1,               | 1,               | 1,                  | 1,             | 1,               | 1,               | 1,               | 1,               | 1,                                      | 1,               | 1,               | 1,             | 1,               | 1,               | 1,                  |                  | 1,               | 1,               |
| H0049: 1, H0620: |       | H0354: 1, H0355: | 099: 1, H0188: | H0252: 1, H0328: | H0622: 1, H0553: | H0644: 1, H0111: | H0169: 1, H0598: | S0036: 1, H0135: | H0616: 1, H0062: 1, | 063: 1, H0366: | 352: 1, S0448: | S0472: 1, H0652: | S0144: 1, S0142: | S0426: 1, L0520: 1, | 762: 1, L0763: | .0770: 1, L0638: | .0761: 1, L0374: | .0771: 1, L0648: | .0767: 1, L0387: | .0381: 1, L0655:                        | .0606: 1, L0661: | .0517: 1, L0782: | 783: 1, L0809: | L0544: 1, L0543: | .0647: 1, L0788: | .0789: 1, S0428: 1, | S0216: 1, S0374: | H0691: 1, H0690: | H0666: 1, H0651: |
| OHI              | OH    | HO               | OH.            | EH.              | DHI.             | OH .             | )H               | <u>S</u>         | OH<br>H             | OH .           | <u>s</u>       | <u>S</u>         | <u>S</u>         | 08                  | <u>3</u>       | <u>3</u>         | <u>3</u>         | <u>3</u>         | <u> </u>         | <u>3</u>                                | <u> </u>         | <u> </u>         | <u>3</u>       | 2                | <u> </u>         | <u>.</u>            | <u>S</u>         | H                | HC               |
|                  |       |                  |                |                  |                  |                  |                  |                  |                     |                |                |                  | ·                | ·                   |                |                  | - <del>-</del>   |                  |                  |   |                  |                  |                |                  |                  |                     |                  |                  |                  |
|                  | _     |                  |                |                  |                  |                  |                  |                  |                     |                |                |                  |                  | <del></del>         | in the desire  |                  |                  |                  |                  | *************************************** | -                |                  |                |                  |                  |                     |                  |                  |                  |
|                  |       |                  |                |                  |                  |                  |                  |                  |                     |                |                |                  |                  |                     |                |                  |                  |                  |                  |   |                  |                  |                |                  |                  |                     |                  |                  |                  |
|                  |       |                  |                |                  |                  | ,                |                  |                  |                     |                |                |                  |                  |                     |                | ٠                |                  |                  |                  |   |                  |                  |                |                  |                  |                     |                  |                  |                  |
|                  |       | `                |                |                  |                  |                  |                  |                  |                     |                |                |                  |                  |                     |                |                  |                  |                  |                  |   |                  |                  |                |                  |                  |                     |                  |                  |                  |

|  |                     | •                   | :                   |                        |          |                     |                     |                     |          |                     |                        |           |                  |                     | -                   |                    |                       |   |   |   |                       |                     |                       |                     |                     |                     |                     |                     |
|--|---------------------|---------------------|---------------------|------------------------|----------|---------------------|---------------------|---------------------|----------|---------------------|------------------------|-----------|------------------|---------------------|---------------------|--------------------|-----------------------|---|---|---|-----------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |                     | ·                   |                     |                        |          |                     |                     |                     |          |                     |                        |           | 8, 4q            | •                   |                     |                    |                       |   |   |   |                       |                     | - 4                   |                     |                     |                     |                     |                     |
| H0518: 1, H0479: 1,<br>L0756: 1, L0779: 1, | L0780: 1, H0343: 1, | H0595: 1, L0588: 1, | L0604: 1, L0697: 1, | S0384: 1 and L0600: 1. |          | AR039: 5, AR089: 4, | AR096: 3, AR104: 2, | AR033: 1, AR055: 1, | AR053: 1 | H0199: 2, H0246: 2, | H0197: 1, H0510: 1 and | H0144: 1. | ۱                | AR089: 7, AR096: 1, | AR061: 1, AR033: 0, | AR053: 0, AR055: 0 | S0408: 32, S0444: 21, | Val-120 to Cys-126, S0442: 20, S0360: 20, | Lys-157 to Gly-166, L0665: 19, S0406: 18, | Gln-169 to Tyr-175, S0436: 18, S0358: 17, | L0666: 17, S0440: 15, |                     | S0376: 10, S0374: 10, | L0662: 9, L0646: 8, | H0672: 8, L0596: 8, | L0601: 8, S0354: 6, | L0664: 6, H0648: 6, | L0777: 6, L0774: 5, |
|  |                     |                     |                     |                        |          |                     |                     | -                   |          |                     |                        |           | Ser-1 to Gly-16, | Pro-26 to Gly-31,   | Thr-40 to Gln-46,   | Pro-59 to Ser-66,  | Pro-69 to Ser-80,     | Val-120 to Cys-126,                       | Lys-157 to Gly-166,                       | Gln-169 to Tyr-175,                       | Arg-205 to Glu-212,   | His-230 to Leu-242, | Gln-277 to Asn-285.   |                     |                     |                     |                     |                     |
|  |                     |                     |                     |                        | 2327     | •                   |                     |                     |          |                     |                        |           | 2328             |                     |                     |                    |                       |   |   |   |                       |                     |                       |                     |                     |                     |                     |                     |
|  |                     | ,                   | ;                   |                        | 37 - 585 |                     |                     |                     |          |                     |                        |           | 5 - 1186         |                     |                     |                    |                       |   |   |   |                       |                     |                       |                     |                     |                     |                     |                     |
|  |                     |                     |                     |                        | 152      |                     |                     |                     |          |                     |                        |           | 153              |                     |                     |                    |                       |   |   |   |                       |                     |                       |                     |                     |                     |                     |                     |
|  |                     |                     |                     |                        | 975754   | •                   |                     |                     |          |                     |                        |           | 975771           |                     |                     |                    |                       |   |   |   |                       |                     |                       |                     |                     |                     |                     |                     |
|  |                     |                     |                     |                        | HLDRT31  |                     |                     | ,                   |          |                     |                        |           | HWLHW86          |                     |                     |                    |                       |   |   |   |                       |                     |                       |                     |                     |                     |                     |                     |

| Г                   |                    |                    |                     | <del>-</del> -     |                     |                     |                     |                     |                     |                    |                     | -                   |                     |                                       |                  |                  |                  |                  |           |           |             | •         |            |                  |                  |                  |                  |                  |                  |
|---------------------|--------------------|--------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------------------------|------------------|------------------|------------------|------------------|-----------|-----------|-------------|-----------|------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                     |                    |                    | ٠                   |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                                       |                  |                  |                  |                  |           |           |             |           |            |                  | ٠.               |                  |                  |                  |                  |
| L                   |                    |                    |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                                       |                  |                  |                  |                  |           |           |             |           |            |                  |                  |                  | <u> </u>         |                  |                  |
|                     |                    |                    |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                                       | ••               |                  |                  |                  |           |           |             |           |            |                  |                  |                  |                  |                  |                  |
| _                   |                    |                    | _                   |                    |                     |                     |                     |                     |                     |                    |                     | •                   |                     |                                       |                  |                  |                  |                  |           |           | •           |           |            |                  |                  |                  |                  |                  |                  |
| ا                   | · 4·               | e,                 | ຕົ                  | 3,                 | 33                  | 3,                  | 7,                  | 2,                  | 2,                  | ر.                 | ્યું                | 2,                  | <b>∼</b> í          | ~                                     | T,               | 1,               | ۲,               | Ι,               | 1,        | 1,        | <del></del> | Ţ,        | <u>1</u> , | 1,               | <del>-</del>     | 1,               | 1,               | 1,               | 1,               |
| S0404: 5. S0356: 4. | .0771: 4, L0657: 4 | H0659: 4, L0372: 3 | .0522: 3, L0776: 3, | 0659: 3, H0658: 3, | 10696: 3, L0750: 3, | ,0779: 3, L0608: 3, | H0615: 2, H0428: 2, | H0169: 2, H0090: 2, | H0059: 2, H0646: 2, | 0640: 2, L0764: 2, | ,2269: 2, H0593: 2, | 10670: 2, L0754: 2, | ,0759: 2, S0434: 2, | 0599: 2, L0362: 2,                    | 10506: 2, H0624: | H0686: 1, L0778: | H0661: 1, H0662: | H0489: 1, H0409: | T0060:    | H0590:    | L0040:      | H0046:    | 1, H0620:  | H0014: 1, S6028: | H0328: 1, H0039: | H0622: 1, L0483: | H0494: 1, H0647: | H0538: 1, L0502: | 3373:            |
| 5. S(               | , 4<br>, L         | 3.4, L             | 3, T(               | 3, H               | 5: 3, L             | 3,T                 | 5: 2, H             | ): 2, H             | ): 2, H             | 2, L               | ; 2, H              | ): 2, L             | . 2, S(             | 2, L                                  | 5: 2, H          | 5: 1, L          | l: 1, H          | 3: 1, H          |           |           | 5: 1, L     | 7: 1, H   | 2: 1, H    | t: 1, S          | 3: 1, H          | 2: 1, L          | t: 1, H          | 3: 1, L          | .0763: 1, L0373: |
| S0404               | 17707              | H0659              | L0522               | 55907              | H069                | 5//07               | H061;               | H0169               | H005                | 762                | 12269               | )190H               | 10759               | 1.0599                                | H0500            | H068(            | 990H             | H0489            | H0592: 1, | H0575: 1, | H0596: 1,   | H0597: 1, | H0012: 1,  | H001             | H0328            | H062             | H049             | H0538            | L0762            |
|                     |                    |                    |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                                       |                  |                  |                  |                  |           |           |             |           |            |                  |                  |                  |                  |                  |                  |
|                     |                    |                    |                     | •                  |                     |                     |                     |                     | •                   |                    |                     |                     |                     |                                       |                  |                  |                  |                  |           |           |             |           |            |                  |                  |                  |                  |                  |                  |
|                     |                    |                    |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                                       |                  |                  |                  |                  |           |           |             |           |            |                  |                  |                  |                  |                  |                  |
| $\vdash$            |                    |                    |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     | •                   | · · · · · · · · · · · · · · · · · · · |                  |                  |                  | _                |           |           |             |           |            |                  |                  |                  |                  |                  |                  |
| _                   |                    |                    |                     |                    |                     |                     |                     | ·<br>               |                     |                    |                     |                     |                     |                                       | _                |                  |                  |                  |           |           |             |           |            |                  |                  |                  |                  |                  |                  |
|                     |                    |                    |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                                       |                  |                  |                  |                  |           |           |             |           |            |                  |                  |                  |                  |                  |                  |
| _                   |                    |                    |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                                       |                  |                  |                  |                  |           |           |             |           |            |                  |                  |                  |                  |                  | _                |
|                     |                    |                    |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                                       |                  |                  |                  |                  |           |           |             |           |            |                  |                  |                  |                  |                  |                  |
|                     |                    |                    |                     |                    |                     | •                   |                     |                     |                     |                    | -                   |                     |                     |                                       |                  |                  |                  |                  |           |           |             |           |            |                  |                  |                  |                  |                  |                  |
|                     |                    |                    |                     | -                  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                                       |                  |                  |                  |                  |           |           |             |           |            |                  |                  |                  | •                |                  | •                |
| -                   |                    |                    |                     |                    |                     |                     |                     | •                   |                     |                    |                     |                     |                     |                                       |                  |                  | -                | <u>.</u>         |           |           |             |           | •          |                  |                  |                  |                  |                  |                  |
|                     |                    |                    |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                                       |                  |                  |                  |                  |           |           |             |           |            |                  |                  |                  |                  |                  |                  |
|                     |                    |                    |                     |                    |                     |                     |                     | _                   |                     |                    |                     |                     |                     |                                       |                  |                  |                  |                  |           |           |             |           |            |                  |                  |                  |                  |                  |                  |

|   |  |                |  | $\prod$             |
|---|--|----------------|--|---------------------|
|   |  | <u></u>        | 113100,<br>124200,<br>147440,<br>158590,<br>160781,<br>163950,<br>163950,<br>235800,<br>235800,<br>276710,<br>600175,  | 001317              |
|   | . •  |                | 12q23-q24  |                     |
| L0644: 1, L0803: 1,<br>L0650: 1, L0775: 1,<br>L0805: 1, L0634: 1,<br>L0636: 1, L0782: 1,<br>L0809: 1, H0547: 1,<br>H0689: 1, H0682: 1,<br>H0683: 1, H0435: 1, | S0378: 1, H0704: 1,<br>L0758: 1, H0707: 1,<br>S0026: 1 and S0460: 1. |                | H0415: 4  Pro-30 to Thr-35, AR053: 17, AR089: Ala-81 to Pro-86, 16, AR033: 12, AR060: Gly-140 to Thr-151, 12, AR039: 12, AR096: Ala-157 to Gly-162, 10, AR104: 9, AR055: Arg-195 to Val-209, 9, AR061: 7  Arg-236 to Ser-245. H0424: 2, H0689: 2, H0318: 1, S0036: 1, L0665: 1, H0684: 1, H0521: 1 and H0555: 1. | L0659: 7, H0486: 4, |
|   | Val. 9 to Gln. 22  | 3,<br>4,<br>3, | H0415: 4  Pro-30 to Thr-35, AR053: 17, Ala-81 to Pro-86, 16, AR033: Gly-140 to Thr-151, 12, AR039: Arg-195 to Val-209, 9, AR061: Arg-236 to Ser-245. H0424: 2, H0318: 1, S L0665: 1, H   | Thr-1 to Thr-33.    |
|   | 7379   | 6757           | 2330   | 2331                |
|   | 3 - 1589   | 69C1 - C       | 1 - 1344   | 1 - 1275            |
|   | 154  | <b>4</b> C1    | 155  | 156                 |
|   | 976051   | 160076         | 976207   | 976216              |
|   | HOFNMS3  | HOFINISS       | HDPSE86  | HHFOE18             |

| Γ                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                    |                 |                   |                       |  |               |                     |                     | <del></del> .       | •                   |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|--------------------|-----------------|-------------------|-----------------------|--|---------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 124200,            | 147440,         | 160781,           | 181405,               | 235800,                                  | 261600,       | 261600,             | 600175,             | 601406,             | 601620,             | 601621              |                     |
|                     |                     |                     |                     | ·                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                        | 12q23-q24.1 124200 |                 |                   |                       |  |               |                     |                     |                     |                     |                     |                     |
| L0748: 4, L0747: 4, | H0328: 3, L0800: 3. | H0050: 2, H0135: 2, | H0059: 2, L0771: 2, | L0790: 2, L0750: 2, | L0777: 2, L0759: 2, | H0624: 1, H0170: 1, | H0717: 1, H0663: 1, | L0005: 1, H0619: 1, | H0645: 1, H0455: 1, | H0013: 1, S0010: 1, | S6028: 1, H0039: 1, | H0031: 1, H0598: 1, | H0102: 1, L0598: 1, | L0763: 1, L0761: 1, | L0803: 1, L0791: 1, | L0666: 1, L0565: 1, | S0126: 1 and L0749: 1. | AR052: 169, AR096: | 135, AR053: 92, | AR089: 91, AR060: | 83, AR033: 59, AR104: | Leu-177 to Asp-183.54, AR039: 40, AR061: | 37, AR055: 29 | H0341: 9, H0657: 7, | S0358: 4, H0251: 4, | H0428: 4, L0748: 4, | L0750: 4, H0445: 4, | S0116: 3, H0333: 3, | H0318: 3, T0041: 3, |
|                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                   |                     |                        | Asp-1 to Ser-12,   | ر.              | Glu-40 to Lys-56, | Ć                     | Leu-177 to Asp-183.                      | ,             | -                   |                     | •                   |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2332               |                 |                   |                       |  |               |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 11 - 604           |                 |                   |                       |  |               |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 157                |                 |                   |                       |  |               |                     |                     |                     | ·                   |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     | •                   | -                   |                     |                     |                     |                     |                        | 896926             |                 |                   |                       |  |               |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        | HHFNH27            |                 |                   |                       |  |               |                     |                     |                     | ·                   |                     |                     |

| Γ               |     |                     |                     |                     | <del>-</del> -      |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  | _         |
|-----------------|-----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------|--------------------|------------------|---------------------|---------------------|------------------|-----------------|------------------|------------------|--------------|------------------|-----------|
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     | -         |                    |                  |                     |                     |                  |                 |                  |                  |              | •                |           |
| _               |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     | •                   |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  | <u>:</u>     | •                | _         |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
| L               |     |                     |                     |                     | <del></del> -       |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     | _                   |                     |                     |           |                    |                  |                     | _                   |                  |                 |                  |                  |              |                  |           |
| _               | ٠,  | ٠,                  | ~ຳ                  | ٠.                  | ۷,                  | ų                   | ર્ય                 | 4                   | ر.<br>د             | ~ໂ                  | ر.<br>د            | ર્ય                 | رر<br>د             | ر.                  | ر.<br>د             | ລົ                  | ລ໌                  | ľ,                  | 1,        | l,                 |                  |                     | l,                  | <del></del>      | <del></del>     | T                | 1,               | <del>-</del> | 1,               | 1,        |
| Š               | 5   | 55.                 | 76: 2               | 30360: 2, S0007: 2, | H0619: 2, H0393: 2, | 10486: 2, H0156: 2, | 10596: 2, H0046: 2, | H0014: 2, H0059: 2, | 70004: 2, H0647: 2, | .0521: 2, L0375: 2, | 0517: 2, H0659: 2, | 10658: 2, H0660: 2, | 10672: 2, S0380: 2, | H0521: 2, S0044: 2, | H0576: 2, L0747: 2, | .0485: 2, L0595: 2, | ,0362: 2, S0026: 2, | H0624: 1, S0180: 1, |           | H0305: 1, H0459: 1 | 20:1             | 30045: 1, S0046: 1, | H0351: 1, S0222: 1, | 249:             | H043: 1, H0331: | H0618: 1, T0071: | H0581: 1, H0421: | L0040:       | H0546: 1, H0009: | 350:      |
| HOR             |     | H                   | S03                 | <u> </u>            | H03                 | H0]                 | H00                 | H00                 | H06                 | L03                 | H06                | HO                  | , S03               | S00                 | 1507                | L05                 | 200                 | S01                 | , H0663:  | , H0               | S0418: 1, S0420: | <b>S</b> 00         | , S02               | H0392: 1, H0249: | H0.             | , T0             | , H0             |              | )H0              | 1, H0050: |
| 6.3             | 5 6 | δ                   | 0:2,                | 0.2,                | 9.2,                | 6: 2,               | 6: 2,               | 4: 2,               | 4:2,                | 1:2,                | 7:2,               | 8: 2,               | 2:2,                | 11: 2,              | 6:2,                | 5:2,                | 2: 2,               | 4: 1,               | 30212: 1, | 5: 1               | %: 1,            | 5: 1,               | 1:1                 | 2: 1             | 13: 1           | 8: 1             | 31: 1            | H0263: 1,    | <b>6</b> : 1,    |           |
| S0126-3 H0670-3 |     | HU648: 3, HU343: 3, | H0170: 2, S0376: 2, | 3036                | H061                | <b>H</b> 048        | <b>H059</b>         | H001                | 000                 | .052                | L051               | H065                | 190H                | H052                | H057                | 2048                | L036                | H062                | 3021      | H030               | <b>S041</b>      | <b>S</b> 004        | H035                | H035             | H064            | H061             | H058             | H026         | H054             | H0123:    |
| Ť               | 4_E |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 | _,               |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 | •                |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del>,</del>       |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           | -                  |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     | ,                   |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    | •                   |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
| L               |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     |                  |                 |                  |                  |              |                  |           |
|                 |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |           |                    |                  |                     |                     | _                |                 |                  |                  |              |                  |           |

|                  | <u> </u>         |                    | -                |                    |                    |                  |                    |   |                    |                  |                  |               |             |                    |                  |                  |                     |                 |                  | -           |                    |                  |                  |                    |                  |                  |                  |                  |                   |
|------------------|------------------|--------------------|------------------|--------------------|--------------------|------------------|--------------------|---|--------------------|------------------|------------------|---------------|-------------|--------------------|------------------|------------------|---------------------|-----------------|------------------|-------------|--------------------|------------------|------------------|--------------------|------------------|------------------|------------------|------------------|-------------------|
|                  |                  |                    |                  |                    |                    |                  | _                  | -                                       |                    |                  | ,                |               |             |                    |                  |                  |                     |                 |                  |             |                    |                  |                  |                    |                  |                  | •                |                  |                   |
| 1,               | .1,              | :1,                | 1,               | : 1,               | 1,                 | 1,               | : 1,               | 1,                                      | <del>-</del>       | :1,              | . 1,             | 1,            | : 1,        | .1,                | .1,              | 1,               |                     | 1,              | 1,               | 1,          | 1,                 | :1,              | : 1,             | . T.               | 1,               | 1,               | 1,               | 1,               | 1,                |
| .0471: 1, H0012: | H0023: 1, H0015: | H0083: 1, H0510: 1 | S0336: 1, H0687: | H0290: 1, H0028: 1 | S0250: 1, S0022: 1 | H0615: 1, T0006: | H0030: 1, H0169: 1 | S0364: 1, H0068:                        | S0366: 1, H0376: 1 | H0598: 1, H0090: | H0040: 1, H0412: | 9: 1, 1.0564: | 2: 1, H0494 | H0359: 1, H0646: 1 | S0422: 1, H0026: | .0520: 1, L0625: | .0764: 1, L.0767: 1 | .0806: 1, L0655 | .0657: 1, L0809: | 9: 1, L0789 | .0664: 1, S0374: 1 | .0565: 1, H0689: | H0435: 1, H0414: | H0666: 1, H0539: 1 | S0378: 1, S0004: | S0146: 1, S0027: | S0028: 1, S0206: | L0741: 1, L0439: | .0740: 1, L.0754: |
| L047             | H007             | 800H               | 8033             | H025               | S025               | H061             | H003               | 8036                                    | 8036               | H055             | H004             | T006          | T004        | H035               | S042             | L052             | P076                | )F080           | T065             | L051        | F066               | L056             | H045             | )90H               | S037             | S014             | S002             | 1.074            | L074              |
|                  |                  |                    |                  |                    |                    |                  |                    |   |                    |                  |                  |               |             |                    |                  |                  |                     |                 |                  |             |                    |                  |                  |                    |                  |                  |                  |                  |                   |
|                  |                  |                    |                  |                    |                    |                  |                    |   |                    |                  |                  |               |             |                    |                  |                  |                     |                 |                  |             |                    |                  |                  |                    |                  |                  |                  |                  |                   |
|                  |                  |                    |                  |                    |                    |                  |                    |   |                    |                  |                  |               |             |                    |                  |                  |                     |                 |                  |             |                    |                  |                  |                    |                  |                  |                  |                  |                   |
|                  |                  |                    |                  |                    |                    | -                |                    | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                    |                  | <del></del>      |               |             |                    |                  |                  |                     | <u> </u>        |                  |             |                    |                  |                  |                    |                  |                  | -                |                  |                   |
|                  |                  |                    |                  |                    |                    |                  |                    |   |                    |                  |                  |               |             |                    |                  |                  |                     |                 |                  |             |                    |                  |                  |                    |                  |                  |                  | ,                |                   |
|                  |                  |                    |                  |                    |                    |                  |                    |   |                    |                  |                  |               |             |                    |                  |                  |                     |                 |                  |             |                    |                  |                  |                    |                  |                  |                  |                  |                   |

|   |           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                        |           | 203800,             | 602404                                  |                     |                     |                     |
|---|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|------------------------|-----------|---------------------|---|---------------------|---------------------|---------------------|
|   |           |                     |                     |                     | -                   |                     |                     | 1                   |                     |                     |                     |                        |                     |                        |           | 2p14-p13            | -                                       |                     |                     |                     |
| L0749: 1, L0756: 1,<br>L0777: 1, L0731: 1,<br>L0758: 1, L0581: 1,<br>L0599: 1, L0608: 1,<br>L0594: 1, L0603: 1,<br>H0668: 1, H0665: 1,<br>H0667: 1, S0194: 1,<br>H0542: 1, H0423: 1,<br>H0422: 1, S0424: 1 and<br>H0506: 1. | H0444: 1  | L0748: 6, L0777: 4, | H0685: 2, L0599: 2, | H0575: 1, S0010: 1, | H0421: 1, H0169: 1, | H0264: 1, H0413: 1, | L0769: 1, L0646: 1, | L0803: 1, L0653: 1, | L0776: 1, L0792: 1, | H0659: 1, H0658: 1, | S3014: 1, S0028: 1, | L0751: 1 and L0779: 1. | H0549: 1, S0222: 1, | H0266: 1, H0428: 1 and | S0370: 1. | L0519: 5, L0756: 5, | L0731: 5, L0665: 4,                     | L0717: 3, S0474: 3, | L0794: 3, L0663: 3, | H0547: 3, H0682: 3, |
|   |           | Arg-1 to Arg-45,    | Glu-47 to Arg-77,   | Asp-79 to Ser-100.  |                     |                     |                     |                     |                     | •                   |                     |                        |                     |                        |           | Gly-85 to His-97,   | Gly-125 to Gly-130. L0731: 5, L0665: 4, |                     |                     |                     |
|   | 2333      | 2334                | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2335                |                        |           | 2336                |   |                     |                     |                     |
|   | 551 - 357 | 2 - 301             |                     |                     |                     |                     |                     |                     |                     | •                   |                     | •                      | 1 - 123             |                        |           | 179 - 652           |   |                     |                     |                     |
|   | 158       | 159                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 160                 | -                      |           | 161                 |   |                     |                     |                     |
|   | 977264    | 977704              |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                        | 978593              |                        |           | 978812              |   |                     |                     |                     |
|   | HMMBZ81   | HSLGF32             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HEEAH23             |                        |           | HODFU73             |   |                     | -,-                 |                     |

|                     |                     | -                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                        |           |                     |                     | -                   |                     |                     |                     |                     |
| H0660: 3, H0615: 2, | H0551: 2, L0650: 2, | L0805: 2, L0659: 2, | L0809: 2, L0666: 2, | L0439: 2, L0740: 2, | L0745: 2, L0750: 2, | H0352: 2, H0411: 1, | H0431: 1, H0590: 1, | L0738: 1, H0015: 1, | H0071: 1, S6028: 1, | H0328: 1, H0688: 1, | H0039: 1, H0622: 1, | H0591: 1, H0264: 1, | S0422: 1, L0638: 1, | L0662: 1, L0803: 1, | L0375: 1, L0657: 1, | L0791: 1, L0664: 1, | H0144: 1, L0352: 1, | H0690: 1, H0658: 1, | H0670: 1, H0666: 1, | L0754: 1, L0746: 1, | L0777: 1, L0755: 1 and | S0412: 1. | L0754: 3, L0591: 3, | H0659: 2, L0748: 2, | H0663: 1, H0662: 1, | S0354: 1, S0376: 1, | L0021: 1, S6028: 1, | H0616: 1, T0067: 1, | S0422: 1, L0520: 1, |
|                     |                     |                     |                     | :                   | <b>!</b>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   | -                   |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | •                   |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                        |           | 353 2337            |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   | •                   |                     |                        | -         | 162   1399 - 353    |                     |                     |                     |                     | ········            |                     |
|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | ,                   |                        |           | 866846              |                     | _                   |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                        |           | HNBUA49             |                     |                     |                     |                     |                     |                     |

|   | 145001,<br>145260,<br>150292,<br>208250,<br>600759,<br>601652,<br>601975   |  |
|---|--|--|
|   | 1925.1-<br>932.3   |  |
| L0769: 1, L0764: 1,<br>L0766: 1, L0653: 1,<br>L0659: 1, L0529: 1,<br>L0666: 1, L0663: 1,<br>L0664: 1, L0665: 1,<br>L0565: 1, H0648: 1,<br>H0522: 1, H0436: 1,<br>L0439: 1, L0756: 1,<br>L0755: 1, L0758: 1, | H0046: 9, H0494: 6, S0358: 4, H0622: 2, H0662: 1, S0356: 1, H0549: 1, H0549: 1, L0761: 1, L0800: 1, H0672: 1, S0152: 1, H0672: 1, H0555: 1, L0748: 1, L0777: 1 and L0601: 1.   | L0748: 3, S0380: 2,<br>H0581: 1, H0477: 1,<br>S0126: 1 and H0543: 1. |
|   | Val-1 to Gly-7, Ala-10 to Ser-15, Ala-32 to Ala-75, Pro-93 to Asp-101, Arg-107 to Gln-117, Glu-133 to Ser-138, Ile-157 to Pro-170, Arg-181 to Glu-192, Ser-200 to Glu-209, Glu-239 to Val-249, Glu-239 to Val-249, Glu-239 to Val-328, Ala-320 to Arg-328, Pro-363 to Arg-338, Lys-396 to Leu-406, Arg-433 to Gly-442, Ser-470 to Asn-481, Arg-498 to Ser-528. | Tyr-28 to Ser-34,<br>Leu-76 to Gln-83.                               |
| ·   | 2338   | 2339   |
|   | 2 - 1603   | 136 - 480  |
|   | 163  | 164  |
|   | 979346   | 979468   |
|   | HVVDU73  | HHESX72  |

| 203800,<br>602404  | 106180,               | 109270,               | 109270,               | 109270,               | 109270,             | 109270,             | 113705,             | 113705,             | 138700,             | 139250,             | 144200,             | 148065,             | 148066,             | 148066,             | 148067,             | 148067,             | 148069,             | 148080,             | 150200,             |
|--|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 2p13   | 17q21-q23             |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0553: 2, H0519: 2,<br>L0731: 2, S0192: 2,<br>S0134: 1, H0306: 1,<br>H0375: 1, H0292: 1,<br>S0144: 1, L0794: 1,<br>L0766: 1, L0775: 1,<br>L0809: 1, H0144: 1,<br>S0126: 1, H0660: 1,<br>H0672: 1, H0521: 1 and<br>S0260: 1.                          | H0521: 53, S0002: 17, | L0809: 13, S0360: 12, | H0522: 12, H0580: 11, | L0766: 11, S0426: 10, | S0278: 9, H0618: 9, | L0758: 8, H0556: 7, | H0581: 7, L0439: 7, | L0731: 7, H0253: 6, | H0038: 6, L0771: 6, | L0794: 6, L0805: 6, | L0518: 6, L0666: 6, | L0748: 6, H0553: 5, | L0764: 5, L0659: 5, | L0779: 5, H0265: 4, | H0650: 4, S0408: 4, | S0344: 4, L0667: 4, | L0776: 4, L0759: 4, | L0596: 4, L0604: 4, | L0362: 4, H0486: 3, |
| Arg-38 to Lys-44,<br>Lys-65 to Pro-72,<br>Pro-96 to Tyr-102,<br>Val-117 to Tyr-124,<br>Leu-140 to Gly-154,<br>Pro-167 to Trp-174,<br>Val-180 to Tyr-185,<br>Pro-191 to Tyr-196,<br>Pro-199 to Thr-204,<br>Gln-238 to Ala-244,<br>Val-255 to Val-262. |                       |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |
| 2340   | 2341                  |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     | ,                   |                     |
| 136 - 939  | 164 - 769             |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
| 165  | 991                   |                       | *                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| 979547   | 999616                |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HOCPY88  | HOGDC64               |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| 154275.             | 168610             | 171190,             | 176705,             | 176960,              | 185800,             | 200350,             | 221820,             | 232200,             | 249000,             | 252920,             | 253250,             | 600119,             | 600119,             | 601363,             | 601844              |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|--------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| H0575: 3. H0052: 3. | H0457: 3, H0674: 3 | H0616: 3, L0664: 3, | H0710: 3, L0747: 3, | S0026:: 3, H0542: 3, | H0543: 3, S0134: 2, | S0218: 2, S0444: 2, | H0619: 2, S0222: 2, | H0438: 2, H0592: 2, | S0010: 2, S0474: 2, | H0123: 2, H0014: 2, | H0083: 2, H0673: 2, | F0067: 2, L0638: 2, | .0372: 2, L0646: 2, | .0768: 2, L0804: 2, | .0774: 2, L0655: 2, | .0783: 2, H0144: 2, | H0697: 2, H0702: 2, | .0438: 2, H0658: 2, | H0518: 2, L0743: 2, | .0744: 2, L0749: 2, | .0756: 2, L.0608: 2, | .0601: 2, H0624: 1, | H0394: 1, H0685: 1, | S6024: 1, H0583: 1, | .0785: 1, S0282: 1, | H0663: 1, H0306: 1, | H0589: 1, S0442: 1, | S0358: 1, S0376: 1, | H0676: 1, H0610: 1, |
|                     |                    |                     |                     |                      |                     | <u> </u>            |                     |                     | <u></u>             | . <b></b> .         |                     |                     |                     | _===                |                     |                     |                     |                     |                     |                     | <b>"</b>             |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                    |                     |                     | •                    |                     |                     |                     |                     |                     | <u>-</u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     | -                   |                     |                     |                     |                     | :                   |                     |
|                     |                    |                     |                     |                      |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     | _                   |                     |                     |                     |                     |                     |                     |

|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | ·                |             |                   |                  |           |                  |           |                  | -          |          |                |                    |                     |                  |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------|-------------------|------------------|-----------|------------------|-----------|------------------|------------|----------|----------------|--------------------|---------------------|------------------|
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  | •                |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
| 87: 1,           | 32:1,            | 59: 1,           | 22: 1,           | 21: 1,           | 96: 1,           | 71: 1,           | 15: 1,           | 79: 1,           | 12: 1,           | 55: 1,           | 98: 1,           | 35: 1,           | 79: 1,           | <b>10:</b> 1,    | 42: 1,           | 53: 1,           | 70: 1,      | 51:1,             | 52: 1,           | 03: 1,    | 84: 1,           | 06: 1,    | 57: 1,           | 45: 1,     | 91:1,    | <b>65</b> : 1, | 03: 1,             | 89: 1,              | 35: 1,           |
| , H05            | , H06            | , H05            | , H01            | , H04            | , H05            | , LQ4            | , H00            | , H01            | , S03            | , 100            | , H05            | , H01            | , H03            | , S04            | , S01            | , L07            | , L0770:    | , L07             | , L06            | 1, L0803: | ,107             | , L0606:  | 106              | , L0545:   | . 📑      | , L0665:       | l, H07             | , H06               | l, H04           |
| H0586: 1, H0587: | HÖ497: 1, H0632: | H0257: 1, H0559: | H0427: 1, H0122: | S0182: 1, H0421: | H0309: 1, H0596: | H0597: 1, L0471: | H0012: 1, H0015: | S6028: 1, H0179: | H0271: 1, S0312: | H0622: 1, L0055: | H0708: 1, H0598: | S0036: 1, H0135: | H0040: 1, H0379: | F0041: 1, S0440: | H0633: 1, S0142: | .0369: 1, L0763: | .0631: 1, ] | .0769: 1, L.0761: | .0800: 1, L0662: | L0364: 1, | .0775: 1, L0784: | .0378: 1, | .0527: 1, L0657: | 0558: 1, ] | 0789: 1  | .0663: 1, 1    | H0699: 1, H0703: 1 | S0374: 1, H0689: 1, | H0684: 1, H0435: |
| HOH              | <u>Ĥ</u>         | HO               | <u>H</u>         | <u>S</u>         | EH.              | <u>H</u>         | 呈                | S6(              | <u>H</u>         | 吕                | <u>H</u>         | 20               | 표                | <u>Ř</u>         | H                | <u>2</u>         | <u> </u>    | <u> </u>          | <u>3</u>         | 2         | 3                | 3         | Ŝ                | Ŝ          | <u>S</u> | <u> </u>       | 웊                  | 80                  | H                |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  | •                |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  | ٠                |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
| -                |                  |                  | •                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
| Ŀ                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          | ·              |                    |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                | •                  |                     |                  |
| L                |                  | <del></del>      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | -                |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  | •         |                  |           |                  |            |          |                |                    |                     |                  |
|                  |                  |                  |                  | -                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            | -        |                |                    |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                   |                  |           |                  |           |                  |            |          |                |                    |                     |                  |

|   |  | 125270,<br>125270,<br>128100,<br>137350,<br>146150,<br>191100,<br>215700,<br>223360,<br>223800,<br>253800,<br>253800,<br>268900,<br>601850  |
|---|--|---|
|   |  | 9q33-q34  |
| H0659: 1, H0660: 1,<br>H0672: 1, S0380: 1,<br>H0696: 1, S0188: 1,<br>H0214: 1, S0406: 1,<br>H0555: 1, S0118: 1,<br>L0741: 1, L0750: 1,<br>L0777: 1, S0260: 1,<br>H0445: 1, L0485: 1,<br>S0011: 1, H0423: 1 and<br>H0422: 1. | AR039: 4, AR096: 1,<br>AR053: 1, AR060: 1,<br>AR089: 1, AR033: 1,<br>AR061: 1, AR055: 0,<br>AR104: 0<br>H0036: 1 | L0439: 17, H0013: 16, T0010: 13, S0010: 10, H0052: 10, L0754: 10, S0222: 9, L0743: 8, S0001: 7, H0644: 6, H0144: 6, L0662: 5, L0659: 5, H0657: 5, H0658: 5, L0742: 5, L0591: 5, H0657: 4, S0007: 4, H0441: 4, L0351: 4, S0344: 4, L0741: 4, S0046: 3, H0351: 3, H0575: 3, S0346: 5, H0575: 3, S0346: 5, L0575: 5, H0575: 3, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, L0575: 5, |
|   | Pro-46 to Lys-53.  | Leu-32 to Glu-41, Asn-67 to His-72, Glu-96 to Thr-105, Phe-122 to Leu-130, S0222: 9, L0743: 8, Glu-151 to Glu-157, S0001: 7, H0644: 6, Val-165 to Gly-171, H0144: 6, L0662: 5, Arg-185 to Ile-196, L0659: 5, H0547: 5, Ser-205 to Leu-216, H0658: 5, L0742: 5, Leu-220 to Ala-225, L0591: 5, H0657: 4, Tyr-235 to Leu-243, S0007: 4, H0441: 4, L0741: 4, S0046: 3, H0351: 3, H0575: 3, S0346: 3, H0178: 3,  |
|   | 2342   | 2343  |
|   | 456 - 683  | 883 - 1659  |
|   | 167  | 168   |
|   | 980139   | 980269  |
|   | HSIEA14  | HSPSY43   |

|                    |                    |                  |                  |                     |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                  |                     |                   |                     |                     |                     |                     |                      |           |                     |             |
|--------------------|--------------------|------------------|------------------|---------------------|---------------------|------------------|---------------------|---------------------|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|----------------------|-----------|---------------------|-------------|
|                    |                    |                  |                  |                     |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                   |                     |                     |                     |                     |                      |           |                     |             |
|                    |                    | •                |                  |                     |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                   |                     |                     |                     |                     |                      |           |                     | _           |
|                    |                    |                  |                  | •                   |                     |                  |                     | ,                   |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                   |                     |                     |                     |                     | _                    |           |                     |             |
| 3,                 | m                  | 3,               | 3,               | 3,                  | 3,                  | 3,               | 2,                  | 2,                  | 2,               | 2,                  | 2,                  | 2,                  | 2,                  | 2,                  | 2,                  | 2,                  | 2,                  | 2,                  | 2,               | 2,                  | 2,                | 2,                  | ۲,                  | 2,                  | ر                   | 2,                   | ų         | 2,                  | 2,          |
| \$0250:            | H0090:             | L0543:           | H0539:           | L0750:              | <b>H0445</b> :      | H0542:           | H0294:              | H0650:              | S0212:           | H0255:              | H0619:              | H0587:              | H0618:              | H0194:              | H0012:              | H0615:              | L0455:              | H0264:              | S0038:           | L0372:              | L0649:            | H0520;              | L0355:              | S0027:              | L0748:              | L0751:               | L0588: 2, | L0599:              | H0423:      |
| S6028: 3, S0250: 3 | S0036: 3, H0090: 3 | H0040: 3, L0543: | .0438: 3, H0539: | .0745: 3, L0750: 3, | S0031: 3, H0445: 3, | .0596: 3, H0542: | S6024: 2, H0294: 2, | T0049: 2, H0650: 2, | H0656: 2, S0212: | S0282: 2, H0255: 2, | H0662: 2, H0619: 2, | S0300: 2, H0587: 2, | F0082: 2, H0618: 2, | S0049: 2, H0194: 2, | H0123: 2, H0012: 2, | H0266: 2, H0615: 2, | H0553: 2, L0455: 2, | H0163: 2, H0264: 2, | H0488: 2, S0038: | S0112: 2, L0372: 2, | .0766: 2, L.0649: | .0664: 2, H0520; 2, | H0519: 2, L0355: 2, | 30406: 2, S0027: 2, | .0744: 2, L0748: 2, | .0740: 2, 1.0751: 2, | 30434: 2, | .0605; 2, L0599; 2, | .0361: 2,   |
| 98                 | 200                | HOH              | <u>6</u>         | <u>L0</u>           | 200                 | 01               | <u>86</u>           | )<br>DE             | <u>Ŏ</u> H       | <u>805</u>          | ŎĦ                  | S03                 | <u>D</u>            | 200                 | HO                  | HO                  | HOH                 | HO                  | HÓ               | S01                 | 5                 | <u>01</u>           | H                   | S04                 | 20.                 | 2                    | 20%       | ğ                   | <u>1</u> 03 |
|                    |                    |                  |                  |                     | ٠                   |                  |                     |                     |                  |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                  |                     |                   |                     |                     |                     |                     |                      |           |                     |             |
| ,                  |                    |                  |                  |                     |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                   |                     |                     |                     |                     |                      | ,         |                     |             |
|                    |                    | <del></del>      |                  |                     |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                  |                     |                   |                     |                     |                     |                     |                      |           |                     |             |
|                    |                    |                  |                  |                     |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                  |                     |                   |                     |                     |                     |                     |                      |           |                     |             |
|                    | •                  |                  |                  |                     |                     |                  |                     |                     |                  |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                  |                     |                   |                     |                     |                     |                     |                      |           |                     |             |
|                    |                    |                  |                  |                     |                     |                  | -                   |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                   |                     |                     |                     |                     |                      |           |                     |             |
|                    |                    |                  |                  |                     |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                   |                     |                     |                     |                     |                      |           |                     | -           |
|                    |                    |                  |                  |                     |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                   |                     | •                   |                     |                     |                      |           |                     |             |
|                    |                    |                  |                  | <u>.</u>            |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                   |                     |                     |                     |                     |                      |           |                     | _           |
|                    |                    |                  |                  |                     |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                   |                     |                     |                     |                     |                      |           |                     |             |

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|---------------------|------------------|--------------------|------------------|---------------------|------------------|------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|------------------|------------------|------------------|------------------|------------------|---------------------|------------------------------|------------------|------------------|------------------|-----------|-----------|------------------|-----------|
|                     |                  |                    |                  | ٠                   |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     | •                            |                  |                  |                  |           |           |                  |           |
|                     |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  | •                |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           | ٠.               |           |
| _                   |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  | -                |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
|                     |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  | . <b>.</b>       |                  |           |           |                  |           |
|                     |                  |                    |                  |                     |                  |                  | •                  |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
|                     |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
| 2.5                 | ; <del>1</del> , | 5: 1,              | . <u>1</u> ,     | % T;                | : T              | : T,             | ; 1,               | <u>.</u> :       | <b>)</b> : 1,    | 8: I,            | 3: 1,            | 7: 1,            | 3: 1,            | 1: 1,            | 7: 1,     | 6: 1,            | 0: 1,            | 0: 1,            | ): 1 <b>,</b>    | 7: 1,            | »: 1,               | : I,                         | 7: 1,            | 8: 1,            | 8: 1,            | 2: 1,     | 4: 1,     | 1: 1,            | 6: 1,     |
| 1050                | 10170            | 10686              | 6990             | 1063                | 2442             | 0360             | 0208               | 10261            | 1037             | 1043             | 1064             | 10427            | H025             | 1058             | H0597:    | <b>400F</b>      | 1015             | <b>H005</b>      | 1062             | <b>1000</b>      | 30048               | 0051                         | <b>4026</b>      | 1039             | <b>H032</b>      | H0622:    | H0604:    | 1003             | L0456:    |
| 2. H                | 2, E             | : 1, E             | 1, H             | 1, F                | 1, S             | 1, S             | 1, H               | 1, H             | : 1, F           | : 1, F           | : 1, F           | 1, E             | : 1, F           | : 1, F           | : 1, F    | : 1, I           | 1,1              | : 1, I           | : 1, F           | : 1,1            | : 1, S              | : 1, S                       | : 1, 1           | : 1, 1           | 1.1              | . 1, 1    | : 1, F    | i: 1, I          |           |
| H0422: 2, H0506: 2, | H0352: 2, H0170: | H0556: 1, H0686: 1 | S0298: 1, H0669: | H0663: 1, H0638: 1, | S0418: 1, S0442: | S0354: 1, S0360: | S0468: 1, H0208: 1 | S0132: 1, H0261: | H0549: 1, H0370: | H0392: 1, H0438: | H0592: 1, H0643: | T0039: 1, H0427: | H0156: 1, H0253: | H0318: 1, H0581: | H0251: 1, | H0546: 1, H0046: | H0457: 1, H0150: | H0009: 1, H0050: | .0471: 1, H0620: | H0015: 1, N0007: | H0201: 1, S0048: 1, | S0388: 1, S0051: 1,          | H0083: 1, H0267: | H0271: 1, H0398: | H0188: 1, H0328: | H0039: 1, | F0006: 1, | H0424: 1, H0031: | H0166: 1, |
| 臣                   | Œ                | 三                  | <u>x</u>         | Ħ                   | <u>8</u>         | <u>8</u>         | <u>8</u>           | <u>x</u>         | H                | Ħ                | H                | E                | 耳                | 王                | H         | Ή                | 王                | 프                | 그                | 工                | 王                   | <u></u> $ \bar{\mathbf{x}} $ | 正                | <u> </u>         | 프                | 프         | <u> </u>  | <u> </u>         | 工         |
|                     |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
|                     |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
|                     |                  |                    |                  | :                   |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
| L                   |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  | _         |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
|                     |                  |                    |                  | ١                   |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
| L                   |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  | -                |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
|                     |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
|                     |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
|                     |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  | -                |           |           |                  |           |
| -                   |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  | •                |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
|                     |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
|                     |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
| -                   |                  |                    |                  |                     |                  | <del></del>      |                    |                  | _                |                  |                  |                  |                  |                  |           |                  |                  | ,                |                  |                  |                     |                              |                  |                  |                  |           |           |                  | -         |
|                     |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  | •                |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |
|                     |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     | ٠                            |                  |                  |                  |           |           |                  |           |
| نــــا              |                  |                    |                  |                     |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                     |                              |                  |                  |                  |           |           |                  |           |

|                 |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                        |           |                     | ٠                   |                   |                            |                            |                     |                     |
|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|-------------------|----------------------------|----------------------------|---------------------|---------------------|
|                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                   |                            |                            |                     |                     |
| H0124 1 H0038 1 | H0087: 1, H0551: 1, | H0272: 1, H0412: 1, | F0042: 1, H0494: 1, | H0560: 1, H0633: 1, | L0598: 1, L0369: 1, | L0763: 1, L0769: 1, | L0630: 1, L0646: 1, | L0521: 1, L0794: 1, | L0629: 1, L0517: 1, | L0382: 1, L0809: 1, | L0789: 1, L0792: 1, | L0666: 1, L0665: 1, | S0216: 1, S0122: 1, | H0683: 1, H0684: 1, | S0330: 1, H0709: 1, | H0521: 1, H0555: 1, | H0436: 1, H0576: 1, | S0028: 1, L0746: 1, | L0753: 1, L0731: 1, | H0707: 1, L0485: 1, | L0366: 1, S0276: 1 and | H0543: 1. | AR089: 2, AR060: 2, | AR033: 2, AR096: 1, |                   | AR104: 0, AR055: 0,        | AR053: 0                   | H0261: 1, H0370: 1, | H0559: 1, H0013: 1, |
|                 | <del>1 -</del> 1    | <u> </u>            |                     |                     |                     | <u>.</u>            |                     |                     |                     |                     |                     | _===                |                     |                     | 9,1                 |                     |                     |                     |                     |                     |                        |           |                     | Cys-47 to Leu-61,   | Ser-82 to Tyr-88, | Cys-182 to Tyr-187, AR104: | Trp-268 to Asp-285. AR053: | ,                   |                     |
|                 | ,                   |                     |                     | :<br>:              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 220 - 2199 2344     |                     |                   |                            |                            | ·                   |                     |
| -               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                        |           | 169 220             | -                   |                   |                            |                            |                     |                     |
|                 |                     |                     | <u></u>             | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | •         | 981029              |                     |                   |                            |                            |                     |                     |
|                 |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HSXBH24             | •                   |                   |                            | ·                          |                     |                     |

|   |                        |   | Şp   |
|---|------------------------|---|--|
| H0510: 1, S0036: 1,<br>H0100: 1, L0771: 1,<br>L0659: 1, H0666: 1,<br>L0779: 1 and L0758: 1. | H0415: 1 and H0414: 1. | AR096: 3, AR033: 2, AR053: 2, AR039: 2, AR039: 2, AR089: 2, AR089: 2, AR104: 1, AR061: 1, AR104: 1, AR055: 1, AR052: 0 L0766: 3, L0777: 3, L0757: 2, L0759: 2, L0759: 2, L0759: 2, L0759: 1, H0594: 1, R0594: 1, R0514: 1, H0528: 1, H0615: 1, H0628: 1, L0803: 1, L0666: 1, L0664: 1, S0028: 1, L0664: 1, R0505: 1, H0423: 1 and H0506: 1, H0423: 1 and H0506: 1, H0423: 1 and H0506: 1, H0423: 1 and H0506: 1, H0423: 1 and H0506: 1, H0423: 1 and H0506: 1 | 12, H0052: 6, 4, H0253: 5, 4, H0013: 3, 4, L0775: 3, 4, L0742: 3, 4, L0742: 3,             |
|   | Lys-10 to Gly-21.      | Trp-1 to Lys-6.   | Thr-1 to Asp-12, Arg-27 to Asp-35, Arg-84 to Asp-89, Leu-93 to Thr-99, Pro-104 to Lys-113, |
|   | 2345                   | 2346  | 2347   |
|   | 2 - 505                | 2 - 901   | 421 - 1431   |
|   | 170                    | 171   | 172  |
|   | 981108                 | 981272  | 981309   |
|   | HOFAE61                | HCFOF82   | HOCMT79  |

|   |   | _                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   |   |                     | -                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0748: 3, L0758: 3,                     | H0556: 2, H0685: 2,                     | S0040: 2, H0069: 2, | H0599: 2, H0581: 2, | H0327: 2, H0545: 2, | H0571: 2, H0617: 2, | H0135: 2, H0494: 2, | H0509: 2, L0783: 2, | L0809: 2, L0438: 2, | H0660: 2, L0754: 2, | L0599: 2, H0422: 2, | H0265: 1, L0785: 1, | H0484: 1, S0418: 1, | S0420: 1, H0580: 1, | S0045: 1, H0392: 1, | H0600: 1, H0574: 1, | H0256: 1, L0622: 1, | H0486: 1, H0250: 1, | H0575: 1, H0251: 1, | H0544: 1, H0050: 1, | T0010: 1, H0188: 1, | H0213: 1, H0038: 1, | H0616: 1, H0087: 1, | H0561: 1, S0382: 1, | H0132: 1, L0762: 1, | L0770: 1, L0638: 1, | L0761: 1, L0648: 1, | L0662: 1, L0803: 1, | L0651: 1, L0806: 1, | L0659: 1, L0791: 1, |
| Thr-129 to Asp-137, L0748: 3, L0758: 3, | Leu-265 to Thr-288. H0556: 2, H0685: 2, | <u> </u>            | 1                   | · ·                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     | _                   |                     |                     | _                   |                     |                     |                     |
|   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |
|   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|   | <del></del>   |                                     |                                     |  |
|---|---|-------------------------------------|-------------------------------------|--|
|   | 102770,<br>201810,<br>601414,<br>601691,<br>601691,<br>601691,<br>601691,<br>601718,                        |                                     |                                     | 214400,<br>600415,<br>601653,<br>601653,<br>602476   |
|   | 1p11.1-13.1 102770,<br>201810,<br>201810,<br>601691,<br>601691,<br>601691,<br>601691,<br>601691,<br>601691, |                                     |                                     | 8q13.3   |
| H0682: 1, H0539: 1,<br>H0518: 1, H0521: 1,<br>H0436: 1, L0741: 1,<br>L0743: 1, L0757: 1,<br>S0031: 1, L0595: 1,<br>H0542: 1 and H0423: 1. | H0620: 1, H0615: 1,<br>H0063: 1 and H0494: 1.   | H0087: 2, H0660: 1<br>and H0672: 1. | H0686: 1, H0685: 1<br>and S0053: 1. | L0751: 6, L0588: 6,<br>L0748: 5, L0758: 5,<br>S0007: 4, S0438: 4,<br>L0763: 4, L0776: 4,<br>L0759: 4, L0604: 4,<br>L0594: 4, L0362: 4,<br>S0358: 3, S0410: 3,<br>H0575: 3, H0617: 3,<br>S0440: 3, L0775: 3,<br>L0809: 3, S0374: 3,<br>L0742: 3, H0656: 2,  |
|   |   |                                     | Asn-1 to Lys-6.                     | Ala-1 to Ala-12, L0751: 6, L0588: 6 Cys-57 to Tyr-65, L0748: 5, L0758: 5, Glu-76 to Asp-82, S0007: 4, S0438: 4, Arg-100 to Pro-105, L0759: 4, L0776: 4, Asp-110 to Pro-126, L0759: 4, L0362: 4, Lys-147 to Pro-172, S0358: 3, S0410: 3, Pro-182 to Asp-188, H0575: 3, H0617: 3 Arg-199 to Met-205.S0440: 3, L0775: 3, L0742: 3, H0656: 2, L0742: 2, L0742: 3, H0656: 2, L0742: 2, L0742: 2, L0742: 2, L0742: 2, L0742: 2, L0742: 2, L0742: 2, L0742: 2, L0742: 2, L0742: 2, L0742: |
|   | 2348  |                                     | 2350                                | 2351   |
| ;   | 1 - 405   | 330 - 470                           | 229 - 2                             | 2 - 616  |
|   | 173   | 174                                 | 175                                 | 176  |
|   | 981319  | 981593                              | 981606                              | 981768   |
|   | HKAE103   | HOCPO31                             | HAOTG88                             | HVCAH21  |

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| S0360: 2, S0278: 2, | 0622: 2, \$0010: 2, | H0251: 2, H0408: 2, | 70023: 2, T0006: 2, | (10067: 2, H0509: 2, | .0646: 2, L0766: 2, | 0381: 2, L0774: 2, | .0806: 2, L.0526: 2, | .0518: 2, L0665: 2, | H0689: 2, H0658: 2, | S0378: 2, H0710: 2, | .0754: 2, L0750: 2, | .0731: 2, L0590: 2, | .0591: 2, L0485: 2, | H0543: 2, H0265: 1, | S6024: 1, H0657: 1, | S0212: 1, H0661: 1, | H0663: 1, H0638: 1, | 80420: 1, 80354: 1, | 5: 1, S0408: 1, | S0132: 1, H0393: 1, | H0282: 1, H0299: 1, | H0333: 1, H0643: 1, | H0574: 1, L0623: 1, | H0486: 1, T0060: 1, | H0250: 1, T0115: 1, | F0110: 1, H0530: 1, | 2: 1, H0373: 1, | H0030: 1, H0553: 1, | 3: 1, H0674: 1, |
| 80360               | 7.062               | H025                | T002                | T006                 | 1064                | 1038               | 1080                 | L0518               | 890H                | S0378               | . TO75              | [1073]              | 1029                | H054                | Z09S                | S0212               | 990H                | 80420               | S0376           | 50132               | H028                | H033                | H057                | H048                | H025                | T0110               | H0012: 1,       | E00H                | H0673: 1        |
|                     |                     |                     |                     |                      |                     |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                 |                     |                     |                     |                     |                     |                     |                     |                 |                     |                 |
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| H0708: 1, H0090: 1, |   | H0059: 1, T0042: 1, | H0512: 1, S0370: 1, | S0372: 1, H0633: 1, | H0529: 1, L0520: 1, | <u>_</u> | L0387: 1, L0522: 1, | 1, | L0653: 1, L0558: 1, | L0783: 1, L0382: 1, | L0663: 1, S0053: 1, | H0691: 1, H0593: 1, | H0659: 1, H0670: 1, | H0660: 1, H0666: 1, | H0672: 1, S0328: 1, | S0330: 1, H0539: 1, | S0380: 1, H0518: 1, | S3014: 1, S0027: 1, |   | L0753: 1, L0755: 1, | H0445: 1, S0434: 1, | L0581: 1, L0599: 1, | L0361: 1, H0423: 1, | H0422: 1 and S0446: 1 | AR096: 12, AR052: | 11, AR053: 10, AR033: | 10, AR089: 9, AR055 | 9, AR104: 8, AR060: | 8, AR061: 5, AR039: |
|                     |   |                     | -                   |                     |                     |          |                     |    |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |   |                     | -,                  |                     |                     |                       |                   |                       |                     |                     |                     |
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|                     |   |                     |                     |                     |                     |          |                     |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                       | 177               |                       |                     |                     |                     |
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|   | L0809: 7, H0658: 6, | .0748: 6, S0222: 5, | .0794: 5, L0776: 5, | .0756: 5, L0752: 5, | .0731: 5, L0770: 4, | .0662: 4, L0743: 4, | .0439: 4, L0751: 4, | .0754: 4, L0747: 4, | .0759: 4, H0013: 3,                           | .0769: 3, L0805: 3, | L0789: 3, L0664: 3, | .0740: 3, L0777: 3, | .0753: 3, L0758: 3, | H0333: 2, H0052: 2, | H0545: 2, H0428: 2, | .0483: 2, L0455: 2,                           | H0509: 2, L0763: 2, | .0771: 2, L0803: 2, | ,0804: 2, L0806: 2, | .0527: 2, L0783: 2, | .0666: 2, L0663: 2, | S0152: 2, S0146: 2, | .0744: 2, L.0745: 2, | .0603: 2, H0686: 1, | S0116: 1, H0255: 1, | S0418: 1, S0408: 1, | H0645: 1, H0393: 1, | .0717: 1, H0351: 1, | H0370: 1, H0574: 1, |
| 7 | <b>)</b>            | <u></u>             | <u></u>             |                     | 브.                  |                     |                     |                     | <u>, , , , , , , , , , , , , , , , , , , </u> |                     | 1                   | ,                   | <u>-</u>            | <u>;11;</u>         | <u>i</u>            | <u>, , , , , , , , , , , , , , , , , , , </u> | <u> </u>            | <u> </u>            | <u>.</u>            | 브                   | <u></u>             | S                   | ᆸ                    | <u></u>             | S                   | S                   | <u>Щ</u>            |                     | <u> </u>            |
|   |                     |                     |                     |                     |                     |                     |                     |                     | -   |                     |                     |                     |                     |                     |                     | •   |                     |                     |                     | -                   |                     |                     |                      |                     |                     |                     |                     |                     | ,                   |
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|                  | · + ·            | 1,               | . I,             | 1,               | :1,              | 1,               | : 1,             | 1,               | . <b>—</b>       | 1,               | <b>–</b>          | <del>_</del> | · —î             | 1               | · <del></del>    | 1,               | 1,               |                     | 1 and                   |           | <b>)</b> : 4,       | 3,                  | 2,                 |                  |                  | . 1,             | 1,               | 1,               | 1,               |
| H0156: 1. H0599: | H0590: 1, H0253: | H0390: 1, S0049: | 10009: 1, H0178: | H0071: 1, T0010: | 10252: 1, H0615: | F0006: 1, H0033: | H0424: 1, H0032: | H0124: 1, S0142: | .0638: 1, L0761: | .0641: 1, L0768: | .0774: 1, L.0775: | L0636:       | .0517: 1, L0518: | 0665: 1, H0144: | H0659: 1, H0670: | H0660: 1, H0696: | H0626: 1, S0432: | S0027: 1, L0742: 1, | .0750: 1, L.0757: 1 and |           | L0740: 4, L0749: 4, | .0794: 3, L0766: 3, | H0686: 2, L0662: 2 | .0747: 2, H0663: | S0420: 1, S0358: | .0717: 1, Н0013: | .0638: 1, L0761: | .0364: 1, L0803: | .0657: 1, L0526: |
| 56: 1.           | 90: 1,           | 90: 1,           | 09: 1,           | 71: 1,           | 52: 1,           | 06: 1, 1         | 24: 1,           | 24: 1,           | 38: 1, ]         | 41: 1, ]         | 74: 1, ]          | 57: 1, ]     | 17:1,]           | 65: 1, ]        | 59: 1,           | 60: 1,           | 26: 1,           | 27: 1, ]            | 50: 1, ]                | S0011: 1. | 740: 4,             | 94: 3, 1            | 86: 2,             | 47: 2, ]         | 20: 1, 9         | 17: 1,]          | 38: 1, ]         | 64: 1, ]         | 57: 1, ]         |
| H01              | H05              | H03              | 90H              | 00H              | H02              | <u>1</u> 00      | H0H              | H01              | 106              | 106              | <u>1</u> 02       | 106          | 105              | 106             | 90 <u>H</u>      | H06              | 90H              | <u>S</u> 000        | 107                     | 200       | 1.0                 | <u>101</u>          | 90H                | 107              | S04,             | 1.07             | <u>106</u>       | F03              | 200              |
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|                  |                  |                  |                  |                  |                  |                  |                  | •                |                  |                  |                   |              |                  |                 |                  |                  |                  |                     |                         |           | His-1 to Val-14.    |                     |                    |                  |                  |                  |                  |                  |                  |
| L                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | _                 |              |                  |                 |                  |                  |                  |                     |                         |           | _                   |                     |                    |                  |                  |                  |                  |                  |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |              |                  |                 |                  |                  |                  |                     |                         |           | 2353                |                     |                    |                  |                  |                  |                  |                  |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |              |                  |                 |                  |                  |                  |                     |                         |           | 3 - 482             |                     |                    |                  |                  |                  |                  |                  |                  |
| _                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |              |                  |                 |                  |                  |                  |                     |                         |           |                     |                     |                    |                  |                  |                  |                  | •                |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |              |                  |                 |                  |                  |                  |                     |                         |           | 178                 |                     |                    |                  |                  |                  |                  |                  |                  |
|                  |                  |                  |                  |                  |                  |                  | ,                |                  |                  |                  |                   |              |                  |                 |                  |                  |                  |                     |                         |           | 859                 |                     |                    |                  |                  |                  |                  |                  |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |              |                  |                 |                  |                  |                  |                     |                         |           | 981859              |                     |                    |                  |                  |                  |                  |                  |                  |
| -                |                  |                  |                  |                  | <del>, .</del>   |                  |                  | •                | ٠,               |                  |                   |              |                  |                 |                  |                  |                  |                     |                         |           | S158                |                     |                    |                  |                  |                  |                  |                  |                  |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |              |                  |                 |                  |                  |                  |                     |                         |           | HAOSJ58             |                     |                    |                  |                  |                  |                  |                  |                  |

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| L0787: 1, L0665: 1, | L0438: 1, L0739: 1 and<br>L0592: 1. | H0685: 1, L0623: 1 | L0766: 5, L0747: 4. | L0750: 4, L0777: 4, | S0046: 2, H0486: 2, | L0769: 2, L0805: 2, | H0547: 2, L0749: 2, | L0752: 2, L0759: 2, | L0590: 2, S0026: 2, | H0624: 1, H0686: 1, | H0341: 1, S0358: 1, | S0360: 1, S0045: 1, | H0549: 1, H0587: 1, | L0157: 1, H0566: 1, | H0057: 1, H0320: 1, | H0051: 1, H0687: 1, | S0003: 1, H0428: 1, | H0090: 1, L0794: 1, | L0774: 1, L0806: 1, | L0653: 1, L0655: 1, | L0657: 1, L0659: 1, | L0791: 1, L4501: 1, | L0666: 1, L0664: 1, | H0701: 1, H0672: 1, | S0328: 1, H0539: 1, | S0380: 1, H0478: 1, | L0780: 1, L0755: 1, |
|                     |                                     |                    | Arg-1 to Ile-7.     | Gly-22 to Lys-42,   |                     |                     | S,                  |                     | Tyr-148 to Glu-155. |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| :                   | •                                   | 2354               | 2355                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                                     | 348 - 217          | 3 - 1091            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                                     | 621                | 180                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                                     | 981862             | 981914              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                                     | HOPJT48            | HCFAV61             | -                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     | ,                   |                     |

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| L0731: 1, L0758: 1,<br>H0595: 1, L0592: 1,<br>H0653: 1, H0665: 1 and<br>H0422: 1. | H0150: 26, S0003: 24, S0144: 14, S0278: 12, S0344: 12, L0748: 12, S0358: 10, H0046: 10, H0620: 10, S0214: 10, L0740: 9, H0521: 8, L0740: 9, H0521: 8, H0545: 7, L0754: 7, H00494: 6, S0126: 6, H00494: 6, S0126: 6, H0040: 5, H0030: 4, H0012: 4, H0038: 4, H0012: 4, H0672: 4, L0744: 4, L0755: 4, L0758: 4, L0758: 4, L0758: 4, L0759: 4, S0212: 3, H0640: 3, H0624: 3, H06540: 3, H0669: 3, L0532: 3, H0669: 3, L0532: 3, H0669: 3, L0532: 3, H0669: 3, S0380: 3, L0731: 3, S0026: 3, H0669: 3, S0040: 2, S00 |
| L0731: 1, L0758: 7<br>H0595: 1, L0592:<br>H0653: 1, H0665:<br>H0422: 1.           | H0150: 26, S000;<br>S0144: 14, S0278:<br>S0344: 12, L0748:<br>S0358: 10, H0046;<br>H0620: 10, S0214;<br>L0740: 9, H0521:<br>L0754: 7, H0575:<br>H0494: 6, S0126:<br>H0662: 5, H0031:<br>S0142: 5, L0752:<br>S0360: 4, H0672:<br>H0012: 4, H0687:<br>H0012: 4, H0687:<br>H0049: 4, L0755:<br>L0744: 4, L0755:<br>L0744: 4, L0755:<br>H0550: 3, H0580:<br>H0550: 3, H0428:<br>H0560: 3, H0428:<br>H0616: 3, H0428:<br>H0616: 3, L0532:<br>H0616: 3, L0532:<br>H0689: 3, S0380:<br>L0731: 3, S0026:   |
|   | Gln-79 to Tyr-86, H0150: 26, S0003: 24  Ile-96 to Ser-101, S0144: 14, S0278: 12, Pro-119 to Ser-126, S0344: 12, L0748: 10, H0046: 10, H0620: 10, S0214: 10, L0740: 9, H0521: 8, L0758: 8, H0545: 7, L0758: 7, H0494: 6, H0494: 6, S0126: 6, H0494: 6, S0126: 6, H0040: 4, H0309: 4, H0012: 4, H0038: 4, H0040: 4, H0672: 4, L0758: 4, L0758: 4, L0758: 4, L0758: 4, L0758: 4, L0758: 4, L0758: 4, L0759: 4, S0212: 3, H0540: 3, H0540: 3, H0540: 3, H0660: 3, H0660: 3, H0660: 3, H0660: 3, H0670: 3,  |
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| •   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
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|   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
|   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
|   |                     |  |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
|   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
|   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
|   |                     |  |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                  |                  | _                |                  |                  | _                   |                  |                  |           |            |                     |       |
| H0255: 2, S0376: 2,<br>H0431: 2, H0331: 2,<br>H0427: 2, S0280: 2. | į ų (               | 40581: 2, T0115: 2,<br>40530: 2. H0375: 2. | , 2,                | H0090: 2, H0264: 2, | H0412: 2, H0641: 2, | H0647: 2, L0774: 2, | .;<br>%             | H0547: 2, H0682: 2, | H0658: 2, H0522: 2, | 4                   | 2,                  | 4                   | 4                   | ÷,                  |                  | ∴ ;              | 7: 1,            | 1.               | <u>:</u>         | H0661: 1, H0638: 1, | <u>;</u>         | : <b>1</b> ,     | . 1,      | 1;         | . <u> </u>          | 7:1   |
| H0255: 2, S0376: 2,<br>H0431: 2, H0331: 2,<br>H0427: 2, S0280: 2. | H0599: 2, S0010: 2, | T0115: 2,<br>H0375: 2.                     | .0483: 2, H0598: 2, | 264                 | <u>2</u>            | 774                 | .0666: 2, L0665: 2, | 983                 | 522                 | S0044: 2, S3012: 2, | S0027: 2, L0745: 2, | .0747: 2, L0750: 2, | .0757: 2, L0759: 2, | H0445: 2, S0194: 2, | .0600: 2, H0170: | H0686: 1, S0114: | H0583: 1, H0657: | .0785: 1, H0341: | S0282: 1, H0254: | 93                  | 30348: 1, S0418: | J0005: 1, S0356: | T0008:    | H0208:     | S0046: 1, H0549: 1, | H0497 |
|   | SOS                 |  | H                   | H                   | H                   | 2                   | ន្ទី                | H                   | 出                   | <b>S</b> 3(         | 2                   | 10                  | S                   | 80                  | 田                | S                | H                | H                | $\Xi$            | H                   | Š                | 8                | Ţ         |            | H                   | H     |
| Q Q Q   | į ų (               | οί ο <u>ι</u>                              | ૂં ત્રું            | <br>                | ∴<br>⊘(             | ∵<br>ų              | <br>                | <br>                | ~;<br>.2            | 4,                  | 4                   | .2                  |                     | 2,                  | ÷.               | <u>.</u> .       | 7: 1.            | <u>-</u>         | <u>.</u> ;       | : 1,                | Ξ,               | <u>:</u>         | : T;      | <u>.</u> ; | <u>-</u>            | -     |
| H0255: 2, S0376: 2,<br>H0431: 2, H0331: 2,<br>H0427: 2, S0280: 2, | 565                 | 10581: 2,<br>10530: 2,                     | 483                 | 8                   | 412                 | <u>2</u>            | 99                  | 547                 | 8                   | 4                   | 027                 | 747                 | 757                 | 445                 | 8                | 88               | 583              | 785              | 282              | 199                 | 348              | 9                | S0354: 1, | S0007: 1,  | 8                   | H0455 |
|   | 18.                 | 出出   | ន                   | 표.                  | 丑                   | 呈                   | <u>유</u>            | H                   | 臣                   | <u>8</u>            | <u>S</u>            | <u> </u>            | 3                   | H                   | <u> </u>         | ឣ                | 呈                | <u> </u>         | <u>8</u>         | $\Xi$               | <u>8</u>         | <u> </u>         | <u>8</u>  | <u>S</u>   | 80                  | $\Xi$ |
| •   |                     |  |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
|   |                     |  |                     | ٠.                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
|   |                     |  |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  | •                |                  |                  |                  |                     |                  |                  |           |            |                     |       |
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|   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            | .•                  |       |
|   |                     | -  |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
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|   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
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| •   |                     |  |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
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|   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
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|   |                     |  |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
|   | •                   |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                     |                  |                  |           |            |                     |       |
|   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  | -                |                  |                     |                  |                  |           |            |                     | •     |

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|-----------|------------------|------------------|------------------|------------------|------------------|----------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|----------|-----------|----------|----------|------------------|------------------|------------------|------------------|------------------|--------------|
|           |                  |                  |                  |                  |                  |                      |                  |                  | •                |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
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|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  | ;                |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
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| 1,        | ۳,               | <del>, ,</del>   | Ţ,               | 1,               | 1,               | Τ,                   | 1,               | 1,               | 1,               | 1,    |                  | T,               | 1,               | 1,               | ,<br>1,          | 1,               | 1,               | <del>_</del>     | <u>,</u>          | Į,       | <b>,</b>  | 1,       | Ι,       | <b>_</b>         | <del>,</del>     | 1,               | 1,               | 1,               |              |
| I, H0632: | 64               | 13:              | 35:              | 42:              | H0036: 1, H0037: | 10:                  | :96:             | H0597: 1, H0231: | H0050: 1, L0471: | 94:   | 18:              | H0364: 1, H0328: | H0622: 1, H0644: | H0674: 1, H0063: | H0268: 1, H0269: | 25:              | 46:              | 10:              | 69                | L0761:   | T0768:    | L0766:   | 4.       | 27:              | 43:              | 22:              | H0365: 1, H0684: | H0659: 1, H0648: | <del>.</del> |
| H06       | H0486: 1, T0040: | F0060: 1, H0013: | H0069: 1, H0635: | H0156: 1, H0042: | )<br>H           | S0346: 1, H0310:     | H0251: 1, H0596: | H02              | 긿                | H05   | H0267: 1, S0318: | H03              | H06              | H00              | H02              | H0059: 1, H0625: | S0440: 1, H0646: | H0649: 1, S0210: | .0762: 1, L.0769: | 107      | 107       | 1.07     | , L0804: | .0653: 1, L0527: | .0657: 1, L0543: | H0519: 1, S0122: | H06              | H06              | , S0146:     |
| F. 1,     | 5: 1,            | <u>-</u>         |                  | ?: 1 <b>,</b>    | §: 1,            | . I,                 | :: 1 <b>,</b>    | 7: 1,            | ): 1,            | ): 1, | 7: 1,            | F. 1,            | 2: 1,            | <u>:</u> :1,     | 3: 1,            | . I,             | 1.               | <b>)</b> : 1,    | Ξ.                |          |           | -        | .;       | <u>+</u>         | ٠٠.<br>بــز      | <b>)</b> : 1,    | .:<br>1,         | ): 1,            |              |
| H0574: 1  | 2486             | 990              | 900              | 0156             | 3036             | 346                  | 0251             | 0597             | 305              | 3600  | 0267             | 3364             | 0622             | 7,90             | 3268             | 905              | <del>4</del>     | 8                | 7762              | .0796: 1 | .0773: 1, | .0364: 1 | .0803: 1 | )653             | )657             | 0515             | 3365             | 9659             | S0328: 1     |
| 岜         | Ĭ                | Ĕ                | 王                | 王                | 耳                | $\tilde{\mathbf{x}}$ | 王                | Ξ                | 耳                | 王     | Ĭ                | Ĭ                | Ħ                | Ħ                | Ĭ                | Ħ                | <u>8</u>         | Ĭ                | <u> </u>          | ĭ        | <u> </u>  | <u> </u> | ĭ        | <u> </u>         | <u> </u>         | Ĭ                | Ĭ                | 茁                | <u>x</u>     |
|           |                  |                  |                  | •                |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  | ,                |                  |              |
|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  | •                |              |
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|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
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| ٠         |                  |                  |                  | _                |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  | •                |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  | -                |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  | _                |                  |                  |                   |          |           | •        |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  |                  |                  |                      | . •              |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |
|           |                  |                  |                  |                  |                  |                      |                  |                  |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                   |          |           |          |          |                  |                  |                  |                  |                  |              |

|  | 180105,<br>190900,<br>222800,<br>246900  |
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|  | 7q32   |
| H0448: 1, S0432: 1, S3014: 1, S0028: 1, S0032: 1, L0751: 1, L0753: 1, L0753: 1, L0596: 1, L0589: 1, L0589: 1, L0569: 1, L0603: 1, S0011: 1, H0668: 1, H0653: 1, H0667: 1, S0276: 1, H0542: 1, R0423: 1, H0542: 1, S0458: 1, H0506: 1 and H0293: 1. | L0809: 10, H0150: 4,<br>L0769: 4, L0804: 4,<br>L0757: 4, H0617: 3,<br>L0779: 3, H0662: 2,<br>L0005: 2, S0444: 2,<br>H0545: 2, H0135: 2,<br>H0494: 2, L0803: 2,<br>L0783: 2, L0663: 2,<br>L0777: 2, H0484: 1,<br>H0661: 1, S0420: 1,<br>S0354: 1, S0358: 1,<br>H0619: 1, H0587: 1,<br>H0619: 1, H0587: 1,<br>H0619: 1, H0587: 1,<br>H0123: 1, H0309: 1,<br>H0594: 1, S0312: 1,<br>H0594: 1, S0312: 1, |
|  | Gly-1 to His-11, Pro-26 to Ser-34, Gly-50 to Glu-67, Gly-86 to Pro-91.   |
|  | 2357   |
|  | 16 - 372   |
| ·  | 182  |
|  | 982032   |
|  | HOVJY54  |

|                    |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                        | 138190,           | 254210,           | 271900,             | 600179,             | 600977, | 601202, | 601777 |                   |  |
|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-------------------|-------------------|---------------------|---------------------|---------|---------|--------|-------------------|--|
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                        | 17p13             |                   |                     |                     |         |         |        |                   |  |
| H0033:1, H0424: 1, | H0213: 1, H0316: 1. | H0163: 1, H0087: 1, | H0412: 1, H0059: 1, | H0100: 1, T0041: 1, | S0438: 1, S0144: 1, | S0344: 1, L0770: 1, | L0761: 1, L0800: 1, | L0773: 1, L0662: 1, | L0794: 1, L0375: 1, | L0651: 1, L0379: 1, | L0659: 1, L0383: 1, | • | H0521: 1, H0696: 1, | S0406: 1, S3014: 1, | S0206: 1, L0747: 1, | L0756: 1, L0780: 1, | L0752: 1, L0601: 1, | H0667: 1, H0542: 1 and | H0510: 1          |                   | •                   |                     |         |         |        | 3, AR061:         | AR096: 3, AR089: 3,<br>AR055: 2, AR060: 2. |
|                    | <u></u>             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     | <del></del> ,       |                     |                     |                        | Pro-37 to Ser-45, | Asp-64 to Thr-69, | Asp-151 to Gln-157, | Arg-191 to Lys-196. |         |         |        | Gly-10 to Gly-16, | Pro-25 to Gly-30.                          |
|                    |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |   | ,                   |                     | •                   |                     |                     |                        | 2358              |                   |                     |                     |         |         |        | 2359              |  |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     | -                   |                        | 1 - 756           |                   |                     |                     |         |         |        | 19 - 1146         |  |
|                    |                     | -                   |                     | ۲.                  |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                        | 183               |                   |                     |                     |         |         |        | 184               |  |
|                    | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     | •                   |                     |                     |                        | 982042            |                   |                     |                     | •       |         |        | 982197            |  |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                        | HLDOG74           |                   |                     |                     |         |         |        | HE8MM52           |  |

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|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                        |           |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |
| AR039: 1, AR104: 0, | AR052: 0, AR053: 0 | S0414: 7, L0794: 4, | H0651: 4, L0439: 3, | L0749: 3, H0647: 2, | L0766: 2, L0803: 2, | L0659: 2, L0756: 2, | L0599: 2, H0657: 1, | H0645: 1, S0222: 1, | H0574: 1, H0632: 1, | H0486: 1, H0013: 1, | H0014: 1, H0355: 1, | S6028: 1, S0003: 1, | H0673: 1, L0564: 1, | S0438: 1, L0764: 1, | L0804: 1, L0748: 1, | L0754: 1, L0750: 1, | L0779: 1, L0581: 1, | L0608: 1, S0196: 1 and | H0506: 1. | L0766: 5, L0749: 5, | L0803: 3, L0809: 3, | L0758: 3, S0007: 2, | H0124: 2, H0135: 2, | L0771: 2, L0744: 2, | L0740: 2, L0747: 2, | L0779: 2, L0600: 2, | H0556: 1, S0116: 1, | S0444: 1, H0393: 1, | H0351: 1, L0118: 1, |
|                     |                    |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Cys-1 to Gly-6.     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                    |                     |                     | ;                   | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2360                |                     |                     |                     |                     |                     |                     | -                   | •                   |                     |
|                     | ٠                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2 - 949             |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
|                     |                    |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 185                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                    |                     |                     | •                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 982465              |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HJBCC19             |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|   | 300031,<br>300044,<br>300048,<br>300049,<br>300049,<br>300100,<br>300104,<br>301201,<br>301201,<br>302060,<br>302060,<br>302060,<br>302060,<br>302060,<br>303000, | 303900,<br>304800,<br>305900, |
|---|---|-------------------------------|
|   |   |                               |
|   | Xq28  |                               |
| H0038: 1, H0040: 1,<br>T0042: 1, S0426: 1,<br>L0763: 1, L0662: 1,<br>L0775: 1, L0776: 1,<br>L0659: 1, L0647: 1,<br>L0666: 1, H0670: 1,<br>L0439: 1, L0752: 1,<br>L0595: 1 and H0721: 1. | H0328: 1, H0615: 1, L0804: 1 and H0677: 1.  |                               |
|   | Val-50 to His-55,<br>Ser-75 to Cys-81,<br>Lys-98 to Lys-104.  |                               |
|   | 2361  |                               |
|   | 3 - 899   |                               |
|   | 186   |                               |
|   | 982618  |                               |
|   | HODAA93   |                               |

| 305900,<br>305900,<br>306700,<br>306995,<br>308310,<br>308840,<br>308840,<br>309840,<br>309548, | 309620,<br>309900,<br>310300,<br>310400, | 310460,<br>310460,<br>311300,<br>311510,<br>314400 | 106165,<br>117700,<br>117700,<br>150210,<br>169600,<br>180380,<br>180380,<br>190000,<br>203500, |
|---|--|--|---|
|   |  |  | 3q21-q25  |
| · · · · · · · · · · · · · · · · · · ·   |  |  |   |
|   |  |  | 2,<br>89,<br>156,<br>-205.  |
|   | :  |  | Pro-34 to Ser-42,<br>Cys-82 to Lys-89,<br>Ser-147 to Lys-156,<br>Ser-198 to Cys-205.            |
|   |  |  | 2362  |
|   | :  |  | 91 - 705  |
|   |  |  | 187   |
|   |  |  | 982764  |
|   |  |  | HSPSI74   |

| 222900,<br>232050,<br>276902,<br>600882,<br>601199,<br>601199,<br>601471,<br>601682 |  |  |
|---|--|--|
|   |  |  |
|   | L0742: 11, L0439: 8, H0052: 5, L0794: 5, L0438: 5, S0222: 3, H0457: 3, H0135: 3, L0769: 3, L0769: 3, L0666: 3, H0547: 3, H0423: 3, H0427: 2, H0494: 2, L0369: 2, L0752: 2, L0758: 2, L0752: 2, L0758: 2, L0752: 2, L0758: 2, L0752: 2, L0758: 2, L0752: 2, L0758: 2, L0752: 2, L0758: 2, L0752: 2, L0758: 2, L0752: 2, L0758: 2, L0752: 2, L0758: 2, L0752: 2, L0758: 2, L0752: 2, L0758: 2, L0752: 2, L0758: 2, L0752: 1, H0657: 1, L0427: 1, L0427: 1, L0427: 1, L0457:  S0360: 1, S0350: 1,<br>S0360: 1, H0580: 1,<br>H0645: 1, H0550: 1,<br>H0486: 1, L0309: 1,<br>H0630: 1, H0687: 1,<br>H0428: 1, H0622: 1, |
|   | Gly-12 to Pro-23,<br>Gly-41 to Thr-47.   |  |
|   | 2363   | -  |
|   | 2342   |  |
|   | 188  |  |
|   | 983008   | ;  |
|   | HCEHZ42  |  |

| · .   |   |                                       |
|---|---|---------------------------------------|
|   | 109565,<br>109565,<br>142640,<br>228960,<br>261515,<br>600044   |                                       |
| ·   | 3q27  | . 11                                  |
| H0553: 1, S0038: 1,<br>H0560: 1, H0538: 1,<br>L0638: 1, L0639: 1,<br>L0526: 1, L0783: 1,<br>L0809: 1, L0647: 1,<br>H0519: 1, H0670: 1,<br>H0651: 1, H0521: 1,<br>S0013: 1, S0028: 1,<br>L0741: 1, L0753: 1,<br>L0745: 1, L0731: 1,<br>H0445: 1, L0361: 1, | H0486: 2, H0521: 2,<br>L0748: 2, H0171: 1,<br>H0556: 1, H0638: 1,<br>H0083: 1, L0646: 1,<br>L0794: 1, L0766: 1,<br>L0389: 1, L0803: 1,<br>L0375: 1, L0438: 1,<br>H0519: 1, H0435: 1,<br>H0666: 1, S0328: 1,<br>S0378: 1, L0750: 1,<br>L0777: 1, L0755: 1,<br>L0592: 1, H0668: 1 and   | H0584: 1 and S0126: 1.11              |
|   | Pro-16 to Gly-23, H0486: 2<br>Ser-30 to Lys-38, L0748: 2,1<br>Glu-44 to Cys-50, H0556: 1,<br>Pro-81 to Lys-86, H0351: 1,<br>Gly-135 to Gly-140, H0083: 1,<br>Arg-167 to Thr-176, L0794: 1,1<br>Leu-192 to Phe-201, L0389: 1,1<br>Pro-203 to Ser-209, L0375: 1,1<br>His-216 to Asn-224, L0527: 1,1<br>H05-19: 1,1<br>H05-19: 1,1<br>H05-19: 1,1<br>H05-19: 1,1<br>H05-19: 1,1<br>H05-19: 1,1 | Ala-1 to Asn-16,<br>Thr-65 to Thr-74. |
|   | 2364  | 2365                                  |
|   |   | 1 - 273                               |
| ·   | 189   | 190                                   |
|   | 983592  | 984008                                |
|   | HDPV U15  | HT5GC28                               |

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|                      |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 100678,              | 147280,             | 167000,             | 173350,             | 173350,             | 173350,             | 180020,             | 600320,                                 | 600883,             | 602544              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 6q25.3-q26 100678,   | 1                   |                     |                     |                     | •                   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| S0412: 19, H0657: 7. | L0748: 7, L0777: 7, | H0039: 6, H0659: 6, | L0749: 6, H0040: 5, | L0655: 5, L0747: 5, | L0438: 4, L0742: 4, | L0779: 4, L0758: 4, | L0599: 4, H0341: 3,                     | S0376: 3, H0497: 3, | L0471: 3, H0015: 3, | H0687: 3, H0090: 3, | L0769: 3, L0776: 3, | L0659: 3, L0517: 3, | L0664: 3, H0672: 3, | L0740: 3, L0752: 3, | L0588: 3, L0605: 3, | L0608: 3, L0362: 3, | H0686: 2, H0662: 2, | S0354: 2, S0360: 2, | H0559: 2, H0098: 2, | H0318: 2, H0545: 2, | H0644: 2, L0455: 2, | H0135: 2, H0038: 2, | S0002: 2, L0646: 2, | L0764: 2, L0803: 2, | L0375: 2, L0666: 2, | S0330: 2, H0539: 2, | S0152: 2, H0436: 2, | L0755: 2, L0731: 2, | L0759: 2, S0434: 2, |
| Arg-21 to Glv-28.    | Pro-30 to Ser-36,   | Arg-54 to Arg-61,   | Gln-125 to Gly-130, | Ala-140 to Gln-145. |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |
| 2366                 |                     |                     | -                   |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | ,                   |                     |
| 56 - 523             |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
| 191                  |                     |                     |                     | ·                   |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 984168               |                     |                     |                     |                     | ,                   |                     |   |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HDABW50              |                     |                     |                     |                     |                     |                     | *************************************** |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |

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|---------------------|-------------|---------------------|------------------|------------------|---------------------|---------------------|-------|------------------|----------|------------------|-------|----------|--------------------|----------|-------|-------|---------------------|------------------|------------------|--------------------|--------------------|------------------|------------------|------------------|------|------------------|------------------|------------------|------------------|
|                     |             |                     |                  | •                |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
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|                     |             |                     |                  |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     |             |                     |                  |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     |             |                     | <u> </u>         | <u>.</u>         |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  | <u> </u>         |                  |                  |
| ٠.                  |             | ŗ                   | <b>_'</b>        | •                |                     | ٠                   |       |                  | <b>_</b> | <u>,</u>         |       | <u>_</u> | 1,                 | •        | - :   | 1,    | 1,                  | <u>_</u>         |                  | 1,                 |                    | <u>_</u>         | <u>_</u>         | ŗ,               | 1,   | 1,               | 1,               | 1,               | 1,               |
| 55: 2               | 65: 1       | 22: 1               | 63: 1            | 6: 1,            | <b>%</b> : 1,       | 19: 1               | 51:1  | 70: ]            | 43: 1    | 85: ]            | 13: 1 |          | <u>4</u>           | 16:1     | 49: 1 | 51:   |                     | 23:              | 56: 1            | H0510: 1, H0266: 1 | 33: 1              | 83: 1            | 42: ]            | 32: 1            | 574: | .08:             | 63:              | 112:             | 523:             |
| 3                   | H02         | T00                 | H06              | S035             | S040                | 90H                 | H03   | H03              | H06      | H04              | HOO   | H05      | H00                | S037     | S00   | H02   | H05                 | H01              | H03              | H02                | S00                | 2                | 151              | .0055: 1, H0032: | H06  | H07              | H01              | H04              | HOH              |
| 3: 2,               | 0:1,        | 6: 1,               | 6: 1,            | 3: 1,            | #: 1 <b>,</b>       | 5: 1,               | 3: 1, | 1: 1,            | 6: 1,    | 7: 1,            | 0: 1, | 9: 1,    | 5: 1,              | 0: 1,    | 4: 1, | 2: 1, | 9: 1,               | 6: 1,            | 1:1,             | 0: 1,              | 0: 1,              | 5: 1,            | 1: 1,            | 5: 1,            | 3:1, | 4:1.             | 6: 1,            | 6: 1,            | 3:1              |
| H0543: 2, L0465: 2, | <b>1017</b> | H0556: 1, T0002: 1  | H0656: 1, H0663: | S0348: 1, S0356: | S0444: 1, S0408: 1, | S0046: 1, H0619: 1, | 1039  | H0431: 1, H0370: | 1058     | H0257: 1, H0485: | 000   | 900E     | H0575: 1, H0004: 1 | 3001     | 1037  | H005  | H0309: 1, H0546: 1, | H0046: 1, H0123: | S0051: 1, H0356: | H051               | S0250: 1, S0003: 1 | H0615: 1, L0483: | H0031: 1, L0142: | L005             | H067 | H0124: 1, H0708: | H0316: 1, H0163: | H0616: 1, H0412: | H0413: 1, H0623: |
| <u>н</u> .          | <u> </u>    | <del>)  - - -</del> |                  | <u> </u>         | <u> </u>            | <u> </u>            | بدر   |                  | <u> </u> |                  |       |          |                    | <u> </u> |       |       |                     |                  | <u> </u>         |                    | <u> </u>           | _                |                  |                  |      |                  |                  |                  |                  |
| l                   |             |                     | ·                | •                |                     | ٠                   |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     |             |                     | v                |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     |             |                     |                  | ٠                |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
| <b></b> -           |             |                     |                  |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     |             |                     |                  |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     | <u>.</u>    |                     | <del></del>      | _                |                     | _                   |       |                  |          |                  |       |          |                    |          |       |       |                     |                  | <del></del>      | _                  |                    |                  |                  |                  |      |                  |                  |                  | _                |
|                     |             |                     |                  |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     |             |                     |                  |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  | •                |                  |                  |
|                     | -           |                     |                  |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     |             |                     | _                |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  | <del></del>      |      |                  |                  |                  |                  |
|                     |             |                     |                  |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     |             |                     |                  |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     |             | ·<br>——             |                  |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     |             |                     |                  |                  |                     |                     |       |                  | ٠        |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     |             |                     |                  |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  | •                  |                    |                  |                  |                  |      |                  |                  |                  |                  |
|                     |             |                     |                  |                  |                     |                     |       |                  |          |                  |       |          |                    |          |       |       |                     |                  |                  |                    |                    |                  |                  |                  |      |                  |                  |                  |                  |

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|--------------------|--------------------|------------------|------------------|------------------|---------------------|------------------|-------------------|-------------|-----------|--------------|-----------|--------------|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------|------------------|------------------|--------------|------------------|--------------------|--------------------|--------------------|--------|
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  | ٠                |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              | ·         |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    | and                |        |
| 1,                 | · -:               | :<br>1,          | : 1,             | <u>-</u>         | . I,                | <del></del>      | : 1,              | : 1,        | .1        | : <b>1</b> , | 1;        | : <b>1</b> , | : <b>1</b> , | : <b>1</b> ;     | : 1,             | 9: 1,            | <b>)</b> : 1,    | : 1,             | 3: 1,            | 1;               | : <b>1</b> , | 1,               | : 1 <b>,</b>     | : 1,         | <u></u>          | 3: 1,              | 1;                 | _                  |        |
| 9                  | 4                  | 013              | 0641             | 7426             | 0369                | 0371             | 0761              | L0800:      | 1, L0521: | L0794:       | L0522: 1  | L0654:       | L0527:       | 7490             | 3374             | 890]             | 990]             | 3378             | 0168             | 3012             | 3028         | 0750             | 7570             | L0591: 1     | 0361             | 065                | 3242               | [042               |        |
| 1, T               | 1. S(              | 1, H             | 1, H             | 1, S(            | 1, L                | 1, L             | 1, L              | 1, L        | 1, L      | 1, L         |           |              |              | 1, L             | 1, S(            | 1, H             | 1, H             | 1, S(            | 1, S             | 1, S             | 1, S(        | 1, L             | 1, L             | 1, L         | 1, L             | 1, H               | 1, S(              | 1, H               | Η;     |
| H0100: 1, T0041: 1 | 70042: 1, S0440: 1 | H0509: 1, H0132: | S0150: 1, H0641: | S0422: 1, S0426: | H0529: 1, L0369: 1, | .0520: 1, L0371: | .0796: 1, L.0761: | .0772: 1, ] | L0374: 1  | .0364: 1,    | .0766: 1, | .0805: 1,    | .0606: 1     | .0558: 1, L0647: | .0789: 1, S0374: | HO519: 1, H0689: | H0658: 1, H0660: | S0328: 1, S0378: | H0521: 1, S0168: | H0555: 1, S3012: | 337:         | .0439: 1, L0750: | .0756: 1, L0757: | \$0260: 1, I | .0593: 1, L0361: | S0026: 1, H0653: 1 | S0192: 1, S0242: 1 | H0542: 1, H0423: 1 | H0422: |
| HO                 | Й                  | H                | 80               | <u>8</u> 6       | H<br>H              | <u>3</u>         | 9                 | 2           | 9         | <u> </u>     | <u>9</u>  | <u> </u>     | <u> </u>     | 9                | <u>2</u>         | H                | H                | S0.              | H<br>H           | 品                | SO           | <u> </u>         | 3                | <u>S</u> 0   | <u> </u>         | <u>S</u>           | 80                 | 丑                  | 띮      |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  | •                |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  | •                |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
| _                  |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  | ٠                |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
| -                  |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  | <b></b>          |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              | •                |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              | •                |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  | ,                |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  | •                 |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
| $\vdash$           |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    | _      |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |
|                    |                    |                  |                  |                  |                     |                  |                   |             |           |              |           | •            |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  | •                  |                    |                    |        |
| <u> </u>           |                    |                  |                  |                  |                     |                  |                   |             |           |              |           |              |              |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                    |                    |                    |        |

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|-------------------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 113721,                       | 247200,             | 600059,             | 601545              |                       |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 17p13.3                       |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |             | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| H0360: 12, L0747: 10, 17p13.3 | L0748: 7, S0007: 6, | L0731: 6, L0769: 5, | L0766: 5. L0749: 5. | 1.0740: 4, 1.0751: 4, | L0750: 4, L0779: 4, | L0471: 3, L0776: 3, | L0526: 3, L0666: 3, | L0439: 3, H0686: 2, | S0408: 2, H0625: 2, | L0639: 2, L0646: 2, | L0768: 2, L0774: 2, |             | L0790: 2, H0659: 2, | H0134: 2, L0777: 2, | L0755: 2, H0170: 1, | T0002: 1, H0685: 1, | H0295: 1, S0114: 1, | H0663: 1, H0125: 1, | S0444: 1, S0360: 1, | H0580: 1, S0046: 1, | H0351: 1, H0331: 1, | L0623: 1, H0244: 1, | H0156: 1, T0048: 1, | H0052: 1, H0083: 1, | H0266: 1, H0328: 1, | H0031: 1, H0038: 1, | H0412: 1, T0041: 1, | S0438: 1, S0440: 1, | L0520: 1, L0371: 1, |
| Glu-12 to Arg-25,             | Leu-36 to Gly-41.   |                     |                     |                       |                     |                     | •                   |                     |                     |                     |                     |             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |
| 2367                          |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 207 - 626                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |
| 192                           |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     | • 5         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | . :                 |
| 985043                        |                     | •                   |                     | ,                     |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |
| HAQBH11                       |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |

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|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|-----------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|----------------------|---------------------|
|  | ,                   |                     |                     |                     |                     |                     | ,                   | . <u>-</u>          |                     |                     |                     |                     |                     |                     |                     |   |           |                        | ,         | 4                   |                     |                     |                     |                     |                        | 12                   |                     |
| L0770: 1, L5575: 1,<br>1 0761: 1 1 0667: 1 | L0662: 1, L0794: 1, | L0803: 1, L0775: 1, | L0375: 1, L0658: 1, | L0789: 1, L0532: 1, | L0665: 1, S0374: 1, | H0693: 1, S0126: 1, | H0365: 1, H0711: 1, | H0684: 1, H0660: 1, | S0330: 1, H0521: 1, | H0631: 1, S3012: 1, | L0742: 1, L0743: 1, | L0752: 1, L0757: 1, | L0758: 1, L0759: 1, | L0480: 1, L0588: 1, | L0591: 1, L0592: 1, | • | H0506: 1. | S0212: 1, H0592: 1 and | H0052: 1. | L0779: 3, S0010: 2, | H0581: 1, H0081: 1, | L0770: 1, L0794: 1, | H0689: 1, H0666: 1, | S0330: 1, L0593: 1, | S0424: 1 and H0506: 1. | L0750: 11, S0026: 7, | L0518: 6, L0752: 6, |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |   |           |                        |           | Pro-27 to His-33.   |                     |                     |                     | ·                   |                        | Glu-4 to Gly-12,     | Gly-15 to Lys-21,   |
|  | •                   |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |           | 2368                   |           | 2369                |                     |                     |                     |                     |                        | 2370                 |                     |
| •  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | • |           | 1047 - 727             |           | 1 - 690             |                     |                     |                     |                     |                        | 2 - 547              |                     |
|  | <br>                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |           | 193                    |           | 194                 |                     |                     |                     |                     |                        | 195                  |                     |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |           | 985280                 |           | 985323              |                     |                     |                     |                     |                        | 985401               |                     |
|  |                     | , ···               | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |           | HMVAW42                |           | HAGDF03             |                     |                     |                     |                     |                        | HOPKI29              |                     |

| 7:5,               |  | 20:3,  | 56: 3,                                  | 13: 3,              | 57: 3,              | 40: 2,              | 2: 2,               | 56: 2,               | 5: 2,               | 23: 2,              | 31: 2,              | 46: 2,              | L0763: 2,      | L0774: 2,      | 59: 2,             | L0666: 2,      | 48: 2,              | 14: 2,              | 55: 2,              | 99: 2,             | 50: 1,           | 41: 1,           | 02: 1,           | 48: 1,           | H: 1,            | 40: 1,           | 86: 1,           | 30: 1,           |
|--------------------|--|--|---|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|----------------|----------------|--------------------|----------------|---------------------|---------------------|---------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| L0588: 6, L0747: 5 | 6, LU/36: 3, 30116: 4,<br>2 1 0760: 4 50260: 2 | 3,L0/09. 4, 30300. 3, H0599. 3   | ), H0059: 3, L070                       | L0775: 3, L0743: 3, | L0731: 3, L0757: 3, | H0543: 3, S0040: 2, | T0049: 2, S0212: 2, | H0305: 2, \$0356: 2, | S0358: 2, S0045: 2, | S0278: 2, L0623: 2, | S0003: 2, H0031: 2, | H0412: 2, H0646: 2, | S0142: 2, L076 | L0764: 2, L077 | L0776: 2, L0659: 2 | L0789: 2, L066 | S0126: 2, H0648: 2, | H0694: 2, S3014: 2, | L0754: 2, L0755: 2, | H0445: 2, L0599: 2 | S6024: 1, H0650: | L0808: 1, H0341: | H0484: 1, H0402: | H0638: 1, S0348: | S0376: 1, S0444: | H0440: 1, H0640: | H0409: 1, H0586: | L0586: 1, S0280: |
| Lys-53 to Leu-59,  | Ala-115 to Asp-116,<br>Glv. 137 to Met 143     | Olu-13/ to Met-143, LO/09: 4, 50500: 3,<br>Thr-164 to 1 vs-170 H0599· 3 H0620· 3 | Pro-175 to Glu-180, H0059: 3, L0766: 3, | :                   |                     |                     |                     |                      |                     |                     |                     |                     |                |                |                    |                |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |
| 1                  | <u> </u>                                       |  | - Ω-                                    | •                   |                     |                     |                     | ·                    |                     |                     |                     |                     |                |                |                    |                |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  | ;                |                  |
|                    | -  |  |   |                     |                     |                     |                     |                      |                     |                     | •                   |                     |                |                |                    |                | -                   |                     |                     |                    |                  |                  |                  | •                | -                |                  |                  |                  |
|                    |  |  |   | -                   |                     |                     |                     | -                    |                     |                     |                     |                     |                |                |                    |                |                     | •                   |                     |                    | ,                |                  |                  |                  |                  |                  |                  |                  |
|                    |  |  |   |                     |                     |                     |                     |                      |                     |                     |                     |                     |                |                |                    |                |                     |                     |                     | ٠                  | ,                |                  |                  |                  |                  |                  |                  |                  |

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|                     |                     |                    |                    |                     | ·                  | _                  |                     |                    |                     |                     |                    |                     |                    |                     |                    |                     |             |             |                     |              |                     | _                   |                    |                     |                    |                     |                     |             |             |
| .0021: 1, S0010: 1, | S0665: 1, H0318: 1, | H0581: 1, H0251: 1 | 0040: 1, H0231: 1, | 10545: 1, L0471: 1, | H0012: 1, H0024: 1 | H0014: 1, H0373: 1 | H0051: 1, S0025: 1, | H0266: 1, H0267: 1 | H0288: 1, S0022: 1, | S0214: 1, H0112: 1, | H0405: 1, H0169: 1 | S0364: 1, S0366: 1, | H0090: 1, H0087: 1 | S0112: 1, T0041: 1, | H0494: 1, H0509: 1 | S0144: 1, S0422: 1, | , L0373: 1, | , L0364: 1, | .0650: 1, L0784: 1, | 1, L0657: 1, | .0665: 1, S0052: 1, | S0374: 1, S0122: 1, | H0689: 1, H0684: 1 | H0659: 1, S0328: 1, | H0521: 1, S0406: 1 | H0555: 1, S0027: 1, | .0740: 1, L0749: 1, | 1, H0444: 1 | , L0604: 1, |
| L0021: 1            | S0665: 1            | H0581: 1           | L0040: 1           | H0545: 1            | H0012: 1           | H0014: 1           | H0051: 1            | H0266: 1           | H0288: 1            | S0214: 1            | H0405: 1           | S0364: 1            | H0090: 1           | S0112: 1            | H0494: 1           | S0144: 1            | L0770: 1, 1 | L0768: 1    | L0650: 1            | L0527: 1     | L0665: 1            | S0374: 1            | H0689: 1           | H0659: 1            | H0521: 1           | H0555: 1            | L0740: 1            | L0759: 1    | L0485: 1    |
|                     |                     |                    |                    | ٠                   |                    |                    |                     |                    |                     |                     |                    |                     |                    |                     |                    |                     |             |             |                     |              |                     |                     |                    |                     |                    |                     |                     |             |             |
|                     |                     |                    |                    |                     | . •                |                    |                     |                    |                     |                     |                    |                     |                    |                     | -                  |                     |             |             |                     |              |                     |                     |                    |                     |                    |                     |                     |             | -           |
|                     |                     |                    |                    | •                   |                    |                    | <del></del>         |                    |                     | <del></del>         |                    |                     | <u> </u>           |                     |                    |                     |             |             |                     |              | <del>-</del> :      | <u>-</u>            |                    | <u>_</u>            |                    |                     |                     |             |             |
|                     |                     |                    |                    |                     |                    |                    |                     |                    |                     |                     |                    |                     |                    |                     |                    |                     |             |             |                     |              |                     |                     |                    |                     |                    |                     | <del></del>         |             |             |
|                     |                     |                    |                    |                     | ·                  |                    |                     |                    | · · · · ·           |                     | _                  |                     |                    |                     |                    |                     | •           |             |                     |              |                     |                     |                    |                     |                    |                     |                     |             |             |
|                     |                     |                    |                    |                     |                    |                    |                     | •                  | -                   |                     |                    |                     |                    |                     |                    |                     |             |             |                     |              |                     |                     |                    |                     |                    |                     |                     |             |             |
|                     |                     |                    |                    |                     |                    |                    |                     |                    |                     |                     |                    |                     |                    |                     |                    | ,                   |             |             |                     |              |                     |                     |                    |                     |                    |                     |                     | ;           |             |

|   |           |            |                     |                     |                        |  | [.                  |                     |                     |                     |   |                     | . <u>.</u>          |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                     | •                   |
|---|-----------|------------|---------------------|---------------------|------------------------|--|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   |           | 126600,    | 126600,             | 136435,             | 160980,                | 8/9009                                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | ,         | 2p16       |                     |                     |                        |  |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |
| L0366: 1, H0668: 1,<br>H0653: 1, S0192: 1 and | H0506: 1. | _          | H0543: 2, H0013: 1, | H0090: 1, H0634: 1, | H0551: 1 and H0560: 1. |  | AR061: 3, AR089: 3, | AR096: 3, AR039: 2, | AR060: 2, AR033: 1, | AR104: 1, AR055: 1, | _ | L0751: 6, H0659: 4, | H0657: 2, L0764: 2, | .0655: 2, H0682: 2, | H0521: 2, L0743: 2, | .0749: 2, H0265: 1, | 70049: 1, S0134: 1, | H0255: 1, H0638: 1, | S0358: 1, S0376: 1, | H0637: 1, S0045: 1, | H0549: 1, H0486: 1, | 70060: 1, H0575: 1, | H0581: 1, H0061: 1, | H0266: 1, L0055: 1, | H0068: 1, H0090: 1, | H0551: 1, H0413: 1, | S0142: 1, S0002: 1, |
|   |           |            | Lys-36 to Ala-48, F |                     |                        | Arg-137 to Asp-142,<br>Met-155 to Ser-161. |                     |                     | <b>V</b>            | 4                   |   |                     | -                   | <del>pad</del>      |                     | <u> </u>            |                     |                     | <u> </u>            | <u> </u>            |                     |                     |                     |                     |                     |                     | S                   |
|   |           | 2371       |                     |                     |                        |  | 2372                |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | -                   |                     |                     |                     |
|   |           | 391 - 1293 |                     |                     |                        |  | 1144 - 602          |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |           | 961        |                     |                     |                        |  | 197                 |                     |                     | ٠                   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |           | 985580     |                     |                     |                        |  | 820986              |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |           | HAJCA11    |                     |                     | •                      |  | HWAHA11             |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|  |   | 165500,<br>600700  |
|--|---|--|
|  |   | 3q28 16<br>60  |
| L0769: 1, L0775: 1,<br>L0776: 1, L0657: 1,<br>L0664: 1, H0658: 1,<br>H0670: 1, H0648: 1,<br>S0378: 1, L0779: 1,<br>L0731: 1, L0601: 1 and<br>H0423: 1. | L0717: 2, H0660: 2,<br>S0420: 1, S0376: 1,<br>H0393: 1, H0013: 1,<br>H0266: 1, H0038: 1,<br>H0529: 1, L0800: 1,<br>L0794: 1, L0766: 1,<br>L0657: 1, L0666: 1,<br>H0658: 1, H0626: 1,<br>L0759: 1, H0665: 1, | L0439: 10, L0740: 8, 3q<br>L0794: 7, L0805: 7,<br>L0438: 6, H0539: 6,<br>L0748: 6, L0754: 5,<br>L0769: 4, L0776: 4,<br>H0521: 4, H0615: 3,<br>H0040: 3, H0100: 3,<br>L0595: 3, H0624: 2,<br>H0170: 2, H0656: 2,<br>S0045: 2, H0013: 2,<br>S0045: 2, L0074: 2,<br>L0375: 2, L0806: 2, |
| L0769: 1<br>L0776: 1<br>L0664: 1<br>H0670:<br>S0378: 1<br>L0731: 1<br>H0423:   |   | 26, L<br>26, L<br>57, L<br>106, L<br>116, L<br>125, H<br>125, H<br>127, H<br>157, H<br>157, H<br>157, H<br>157, H<br>157, H  |
|  | Glu-27 to Thr-33.   | Ser-2 to Gly-7, Tyr-18 to Phe-26, Lys-39 to Gly-57, Gly-100 to Pro-106, Asn-109 to Ser-116, Tyr-119 to Ile-125, Pro-151 to Phe-157.  |
|  | 2373  | 2374   |
|  | 2 - 1477  | 1 - 609  |
|  | 198   | 199  |
| ·  | 986158  | 986165   |
|  | HSAMI43   | HNFJH73  |

|                     | <u> </u>            |                     |                     |                     | <del></del>         | •                   |                     |                     |                     |                     | -                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |
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|                     |                     |                     | •                   | ,                   |                     |                     |                     |                     |                     |                     | -                   |                     | •                   |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                        |                     |                     | •                   |                     |
| H0670: 2. H0648: 2. | L0753: 2, L0731: 2, | L0759: 2, L0589: 2, | H0686: 1, S0040: 1, | S0342: 1, L0005: 1, | H0431: 1, H0333: 1, | H0485: 1, H0486: 1, | H0327: 1, H0546: 1, | H0046: 1, H0009: 1, | H0123: 1, H0012: 1, | H0271: 1, H0039: 1, | H0030: 1, H0644: 1, | H0628: 1, H0032: 1, | H0591: 1, H0058: 1, | T0067: 1, S0450: 1, | S0438: 1, L0770: 1, | L0764: 1, L0381: 1, | L0803: 1, L0661: 1, | L0789: 1, H0144: 1, | S0328: 1, H0540: 1, | L0747: 1, L0749: 1, | L0750: 1, L0779: 1, | L0777: 1, L0757: 1, | S0031: 1, H0445: 1, | H0595: 1, L0599: 1, | L0603: 1 and H0008: 1. | L0663: 2, H0556: 1, | H0686: 1, L0717: 1, | L0764: 1, L0794: 1, | LU656: 1, LU665: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                        | Val-15 to Pro-21,   | Leu-56 to Gln-64.   |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                        | 2375                |                     |                     |                     |
|                     | -1                  |                     |                     | •                   |                     | •                   | ٠                   |                     |                     |                     |                     |                     |                     |                     | •                   | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 57 - 248            |                     |                     |                     |
|                     |                     |                     | ٠.                  |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 200                 | -                   |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 986328              |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                        | HNTCH03             |                     |                     |                     |

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|---------------------|---------------------|---------------------|------------------------|----------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                        | 113721,              | 247200,             | 600029,             | 601545                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | -                    | <u> </u>            | 9                   | <u>v</u>                               |                     |                     |                     |                     | •                   |                     |                     |                     |                     | ,                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Ŀ                   |                     |                     |                        | 17p13.3              | I                   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | <u></u>             |                     |
| S0374: 1, H0519: 1, | H0659: 1, H0648: 1, | L0748: 1, L0759: 1, | S0436: 1 and L0608: 1. | L0750: 12, L0747: 7, | H0543: 7, L0748: 6, | L0764: 3, H0539: 3, | H0657: 2, L0785: 2,                    | S0358: 2, H0266: 2, | H0031: 2, L0766: 2, | L0775: 2, L0783: 2, | L0666: 2, L0663: 2, | L0438: 2, H0435: 2, | H0658: 2, H0670: 2, | L0588: 2, H0542: 2, | H0624: 1, S0342: 1, | L0443: 1, L0808: 1, | H0305: 1, L0481: 1, | H0431: 1, H0438: 1, | S0280: 1, L0021: 1, | H0036: 1, H0004: 1, | H0318: 1, N0006: 1, | H0050: 1, L0471: 1, | H0687: 1, S0003: 1, | H0428: 1, L0455: 1, | H0494: 1, H0625: 1, | L0598: 1, L0763: 1, | L0769: 1, L0761: 1, | L0772: 1, L0641: 1, | L0773: 1, L0662: 1, |
|                     |                     |                     |                        | Val-36 to Gly-52,    | ∞,                  | Ser-158 to Thr-163, | Arg-168 to Ala-175, H0657: 2, L0785: 2 | Glu-196 to Arg-205, | Ser-271 to Lys-276, | Val-281 to Tyr-294, | Arg-305 to Met-310, | Cys-314 to Ile-324, | Gln-326 to Tyr-345, | Phe-356 to Trp-361, | Leu-383 to Ala-390, | Glu-412 to Ile-420. |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | 2376                 |                     |                     |  |                     | •                   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | 2 - 1321             |                     | ,                   |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | 201                  |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |
|                     |                     | ,                   |                        | 986744               | •                   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     | ·q                  |                     |                     | •                   |                     |                     |                     |                     |
|                     | •                   |                     |                        | HSUAA20              |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|  | 118504,<br>118504,<br>131242,<br>139320,<br>139320,<br>139320,<br>600281,<br>600281,                               | 112261,<br>176640,<br>176640,<br>176640,<br>236700,<br>601920  |
|--|--|--|
|  | 20q12-q13.21118504,<br>118504,<br>131242,<br>139320,<br>139320,<br>139320,<br>139320,<br>600281,<br>600281,        | 20p12  |
| L0378: 1, L0806: 1,<br>L0776: 1, L0657: 1,<br>L0809: 1, L0647: 1,<br>L0532: 1, S0126: 1,<br>H0689: 1, H0690: 1,<br>H0689: 1, H0660: 1,<br>S0328: 1, H0518: 1,<br>H0134: 1, L0740: 1,<br>L0759: 1, L0749: 1,<br>L0759: 1, L0362: 1,<br>L0608: 1, L0362: 1,<br>L0366: 1, H0136: 1 and<br>S0398: 1. | H0670: 4, S0408: 3,<br>L0666: 3, L0665: 3,<br>H0156: 1, H0615: 1,<br>L0776: 1, L0527: 1,<br>H0658: 1 and H0478: 1. | L0439: 7, L0438: 4,<br>L0770: 3, L0809: 3,<br>S0360: 2, H0011: 2,<br>L0794: 2, H0672: 2,<br>L0749: 2, L0756: 2,<br>L0759: 2, S0046: 1, |
|  | Pro-32 to Ser-37,<br>Arg-52 to Gly-63,<br>Lys-66 to Gly-73.  | Phe-1 to Cys-10.   |
|  | 2377   | 2378   |
|  | 809 - 1054   | 1 - 618  |
|  | 202  | 203  |
|  | 792986   | 987018   |
|  | HSPAD08  | HFKBA32  |

|  | 113900,<br>126340,<br>126391,<br>130410,<br>134790,<br>160900,<br>173850,<br>258501,<br>600040,<br>602225,   |
|--|--|
|  | 19q13.3  |
| H0437: 1, T0048: 1,<br>S0050: 1, S0051: 1,<br>H0687: 1, L0455: 1,<br>H0100: 1, L0351: 1,<br>L0769: 1, L0761: 1,<br>L0768: 1, L0806: 1,<br>L0659: 1, L0383: 1,<br>L0666: 1, H0547: 1,<br>H0539: 1, L0748: 1,<br>L0747: 1, L0780: 1,<br>L0731: 1, L0366: 1 and | L0751: 4, S0126: 3,<br>H0658: 2, L0741: 2,<br>H0171: 1, T0002: 1,<br>S0001: 1, H0619: 1,<br>H0574: 1, H0618: 1,<br>H0199: 1, H0057: 1,<br>H0020: 1, H0201: 1,<br>L0769: 1, L0794: 1,<br>L0769: 1, L0794: 1,<br>L0766: 1, L0774: 1,<br>L0655: 1, L0774: 1,<br>L0655: 1, L0774: 1,<br>L0655: 1, L0774: 1,<br>L0655: 1, L0774: 1,<br>L0655: 1, L0774: 1,<br>L0777: 1, L0780: 1,<br>L0777: 1, L0780: 1,<br>S0031: 1, L0599: 1, |
|  | Val-23 to Gly-32.  |
|  | 2379   |
|  | 50 - 745   |
|  | 204  |
|  | 987071   |
|  | HHFLU49  |

| 180297,<br>248611,                                      | 251000,             | 263200,             | 600211,             | 600701,             | 601690              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 6p22-p21  |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0805: 18, L0776: 16, 6p22-p21<br>L0751: 14, L0759: 10, | L0770: 8, L0769: 6, | L0758: 6, H0351: 4, | L0803: 4, L0807: 4, | L0754: 4, H0716: 3, | S0250: 3, H0615: 3, | H0644: 3, L0791: 3, | L0793: 3, S0408: 2, | H0013: 2, H0594: 2, | H0591: 2, L0796: 2, | L0521: 2, L0662: 2, | L0794: 2, L0774: 2, | L0518: 2, L0792: 2, | L0666: 2, H0144: 2, | H0670: 2, L0740: 2, | L0779: 2, H0624: 1, | S0342: 1, H0640: 1, | H0369: 1, H0549: 1, | H0486: 1, S0280: 1, | L0021: 1, L0022: 1, | S0010: 1, L0109: 1, | H0024: 1, S0051: 1, | H0428: 1, H0622: 1, | H0032: 1, T0067: 1, | H0059: 1, L0640: 1, | L0763: 1, L0773: 1, | L0659: 1, L0809: 1, | L0788: 1, L0532: 1, | L0665: 1, H0547: 1, |
| 2380 Pro-3 to Val-18,<br>Trp-21 to Gly-27.              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 2380  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 164 - 850   |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     | · ·                 |                     |
| 205   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 987112  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |
| HOENX16   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | - **                |                     | ,                   |                     |

| S0126: 1, S0328: 1,<br>S0378: 1, S0037: 1,<br>L0745: 1, L0750: 1,<br>L0777: 1, L0780: 1,<br>S0434: 1, L0361: 1,<br>S0194: 1, S0398: 1,<br>S0460: 1, H0008: 1 and<br>H0352: 1. | L0766: 4, L0665: 4,<br>L0754: 3, H0013: 2,<br>H0052: 2, L0776: 2,<br>H0144: 2, L0777: 2,<br>L0622: 1, H0427: 1,<br>S0344: 1, L0520: 1,<br>L0774: 1, L0775: 1,<br>L0527: 1, L0659: 1,<br>H0682: 1, H0689: 1,<br>H0682: 1, L0741: 1,<br>L0750: 1, L0756: 1,<br>L0750: 1, L0756: 1, | L0439: 70, L0666: 20,<br>L0748: 20, H0013: 15,<br>L0663: 15, L0740: 15,<br>L0754: 14, L0438: 12,<br>L0769: 11, L0752: 11,<br>H0046: 9, L0662: 9,<br>L0776: 9, L0665: 9,<br>H0547: 9, L0766: 8, |
|---|--|--|
| <u> </u>  | Thr-1 to Ser-6.  | Pro-4 to Pro-27, Ala-35 to Arg-43, Asp-56 to Val-61.   |
|   | 2381   | 2382   |
|   | 14 - 400   | 1270 - 68  |
|   | 206  | 207  |
|   | 987165   | 987262   |
|   | HTFOW71  | HTTAG03  |

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|------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|            |                     |                     |                     | <u> </u>            |                     | <del></del>                                  |                     |                     |                     |                     |   | <u>;</u> -          |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u></u>             |                     |                     |
|            |                     |                     |                     |                     |                     | -  |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 7 1 0758.7 | 10/10: 1, 10/20: 1, | S0007: 6, H0040: 6, | .0761: 6, L0659: 6, | 10696: 6, L0753: 6, | .0592: 6, S0010: 5, | 10428: 5, H0144: 5,                          | .0742: 5, L0747: 5, | H0305: 4, S0222: 4, | 10486: 4, S0346: 4, | .0351: 4, L0768: 4, |   | L0756: 4, L0759: 4, | .0594: 4, L0362: 4, | H0556: 3, S0356: 3, | HO587: 3, HO574: 3, | H0575: 3, T0082: 3, | H0318: 3, S0049: 3, | H0251: 3, H0309: 3, | H0327: 3, H0050: 3, | H0014: 3, H0688: 3, | S0036: 3, H0538: 3, | L0638: 3, L0560: 3, | L0651: 3, L0655: 3, | L0517: 3, L0532: 3, | L0664: 3, H0682: 3, | H0659: 3, H0539: 3, | H0521: 3, S0436: 3, | L0591: 3, H0171: 2, | H0265: 2, S0116: 2, | S0420: 2, H0580: 2, |
|            |                     | <u> </u>            | _                   |                     |                     |  |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |
|            |                     |                     |                     |                     |                     | <u>.                                    </u> | -                   |                     |                     |                     |   |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del>-</del>        |                     |                     |
|            |                     |                     |                     | ,                   |                     |  |                     |                     |                     |                     |   | •                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|            |                     |                     |                     |                     |                     | ٠.   |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | ·                   |                     |                     |                     |                     |
|            |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|            |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |   | .`                  | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|            |                     |                     |                     |                     | _                   |  |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|            |                     |                     |                     |                     |                     |  |                     |                     |                     | •                   |   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |

|   | ;  |  |                     |                     | -  |  |  |        |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
|---|--|--|---------------------|---------------------|--|--|--|--------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|
|   |  |  |                     |                     |  | -  | <u>.</u>                                   |        |                     |                     | •                   | <del></del>         |                     |                     |                     |                     |                     | · <del>-</del> ····                        |
|   |  |  |                     |                     |  | <u>.                                    </u> |  |        |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
| H0393: 2, H0392: 2,<br>H0497; 2, L0623: 2,<br>H0427: 2, H0590: 2,<br>H0581: 2, H0652: 2 | H0620: 2, H0687: 2,<br>S0003: 2, H0615: 2, | H0039: 2, L0455: 2,<br>H0090: 2, H0591: 2,<br>H0413: 2, T0042: 2 | L0796: 2, L0648: 2, | L0375: 2, L0809: 2, | HU689: 2, HU6/2: 2,<br>S0330: 2, S0378: 2, | S0404: 2, L0744: 2,                          | L0749: 2, L0777: 2,<br>L0731: 2, L0596: 2, | L0599: | S0026: 2, H0423: 2, | H0170: 1, L0615: 1, | T0002: 1, H0686: 1, | L0423: 1, S0212: 1, | S0282: 1, H0664: 1, | H0241: 1, H0638: 1, | S0358: 1, S0444: 1, | S0360: 1, S0410: 1, | 10008: 1, H0722: 1, | H0208: 1, S0476: 1,<br>H0619: 1, S0300: 1, |
|   |  |  |                     |                     |  |  |  |        | -                   |                     |                     | •                   |                     |                     |                     |                     |                     |  |
|   | · · · · · · · · · · · · · · · · · · ·      |  |                     |                     | •  |  |  |        | •                   |                     |                     |                     |                     |                     |                     |                     |                     |  |
|   | ·<br>:                                     |  |                     |                     |  |  |  |        |                     |                     | -                   |                     |                     |                     |                     |                     |                     | ·  |
|   |  |  |                     |                     |  |  |  |        |                     |                     |                     |                     |                     |                     |                     |                     |                     | :  |
|   |  |  |                     |                     |  |  |  |        |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
|   |  |  |                     |                     |  |  | -  | •      |                     |                     |                     |                     |                     |                     |                     | · · · · · ·         |                     | •  |

|                     |                     |                     |                   |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     | ,                   |                     |                     | -                   | •                   |                     |
|---------------------|---------------------|---------------------|-------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                   |                     |                    | _                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | <del></del> -       |                     |                     | •                   |                    |                     |                     |                     |                     |                     |                     |                     |                     |
| H0351: 1, S0278: 1, | S6022: 1, H0261: 1, | H0441: 1, H0453: 1, | 370: 1, H0455: 1, | H0409: 1, H0586: 1, | )333: 1, H0642: 1, | 10632: 1, H0485: 1, | r0039: 1, T0109: 1, | S0280: 1, H0156: 1, | .0021: 1, H0037: 1, | H0618: 1, H0505: 1, | S0474: 1, H0263: 1, | 10544: 1, H0545: 1, | H0439: 1, H0150: 1, | H0123: 1, H0011: 1, | H0373: 1, L0163: 1, | H0051: 1, S0388: 1, | H0399: 1, H0354: 1, | S6028: 1, H0266: 1, | S0340: 1, S0250: 1, | S0214: 1, L0194: 1, | 0553: 1, L0055: 1, | H0169: 1, H0124: 1, | H0708: 1, H0038: 1, | 10634: 1, H0551: 1, | H0380: 1, H0264: 1, | H0623: 1, S0386: 1, | H0100: 1, L0354: 1, | H0494: 1, S0372: 1, | S0440: 1, S0150: 1, |
| OH                  | 98                  | OH                  | OH HO             | )H                  | )HO                | )H                  | <u>17</u>           | <u>SO</u>           | <u>3</u>            | HC                  | OS SO               | HC                  | )H                  | )H                  | )HC                 | HC                  | H                   | 9S                  | <u>80</u>           | 0S                  | )H                 | )H                  | HC                  | )H                  | H                   | H                   | )H                  | H                   | SO                  |
|                     |                     | -                   |                   |                     | <del></del>        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                   |                     |                    |                     |                     |                     |                     | ·<br>               | ···                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    | - ···               |                     |                     |                     | -                   |                     |                     |                     |
|                     |                     |                     |                   |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | ٠.                 |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                   |                     |                    |                     |                     |                     | ,                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u></u>            |                     |                     |                     |                     |                     |                     |                     |                     |

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|------------------|------------------|------------------|-------------|------------------|---------------|----------------|--------------|----------------|-----------------|-------------|----------|----------|------------------|------------------|----------------|--------------|------------------|------------------|------------------|------------------|-------------|---------------------|--------------|---------------|--------------|------------------|---------------------|-------------|--------------------|
|                  |                  |                  |             |                  |               |                |              |                |                 |             |          |          | -                |                  |                | 1            |                  |                  |                  |                  |             |                     |              |               |              |                  |                     |             |                    |
| 1,               | 1,               | : 1,             | : 1,        | : 1, -           | .1,           |                | .1,          | .1,            | .1              | .1,         | .1,      | .1,      | : 1,             | .1,              | : 1,           | : 1,         | . 1,             | : 1,             | :1,              | . 1,             | : 1,        | : 1,                | 1,           | .1,           | 1,           | : 1,             | 1,                  | . 1,        | . ,                |
| H0646: 1, S0002: | S0426: 1, L0598: | H0529: 1, L0762: | 3: 1, L0371 | .5565: 1, L0667: | '2: 1, L0641: | 4: 1, L0773: 1 | -            | 3: 1, L0767: 1 | L0794: 1, L0381 | 3: 1, L0774 | •        | •        | .0657: 1, L0658: | .0783: 1, L0792: | 3: 1, H0725: 1 | 91: 1, H052C | HO519: 1, H0690: | H0683: 1, H0435: | H0648: 1, H0651: | .0355: 1, S0328: | 0: 1, H0710 | H0518: 1, S0406: 1, | 2: 1, S0028: | .5: 1, L0750: | 5: 1, S0031: | H0444: 1, H0445: | .0683: 1, S0434: 1, | 9: 1, L0590 | .0595: 1, L0366: 1 |
| 90H              | S042             | H05              | 1,076       | 1.556            | L0772:        | L0764:         | L0521: 1     | L0363: 1       | 1079            | L0803: 1    | L0376: 1 | L0628: 1 | F065             | L078             | L0793: 1       | H0691: 1     | H05              | 390H             | 90H              | L035             | S038        | H05                 | S043         | L0745:        | L0755: 1     | H04              | 890T                | L058        | T056               |
|                  |                  |                  |             |                  |               |                |              |                |                 |             |          |          |                  |                  |                |              |                  |                  |                  |                  |             |                     |              |               |              |                  |                     |             |                    |
|                  |                  |                  |             |                  |               |                |              |                |                 |             |          |          |                  |                  |                |              |                  |                  |                  |                  |             |                     | -            |               |              |                  |                     |             |                    |
|                  |                  |                  |             |                  |               |                | <del>-</del> |                |                 |             |          |          |                  |                  |                |              |                  |                  |                  |                  |             |                     |              | -1.           |              |                  |                     |             |                    |
|                  | · · ·            |                  |             |                  |               |                | •            |                |                 |             | ·        |          |                  | -                | <del></del>    |              |                  |                  |                  |                  |             |                     |              | _             | -            |                  |                     |             |                    |
|                  |                  |                  |             |                  |               |                | -            |                |                 |             |          |          |                  |                  | -              |              |                  |                  | <del></del>      |                  |             |                     |              | ····          |              |                  |                     |             |                    |
|                  |                  |                  |             |                  |               | _              |              |                |                 |             |          |          |                  |                  |                |              |                  |                  | _                |                  |             |                     |              |               |              | · .              |                     |             |                    |

|   |  | r- · 1   |
|---|--|--|
|   |  | 106300,<br>108800,<br>120290,<br>120290,<br>120810,<br>120820,   |
|   |  | 6p21.3   |
| S0011: 1, H0667: 1,<br>S0192: 1, S0276: 1,<br>H0542: 1, S0462: 1 and<br>H0506: 1. | S0250: 4, S0358: 3, N0006: 3, H0620: 3, H0014: 3, H0656: 2, H0024: 2, L0776: 2, L0750: 2, S0212: 1, H0450: 1, H0549: 1, H0550: 1, H0575: 1, H0036: 1, H05628: 1, H00373: 1, H0628: 1, H0038: 1, H0551: 1, H0264: 1, H0500: 1, H0494: 1, H0520: 1, H0435: 1, H0520: 1, L0790: 1, H0621: 1, S0027: 1, S0032: 1, L0759: 1, S0434: 1, L0759: 1, S0434: 1, L0759: 1, L0759: 1, H0543: 1 and S0021: 1.                                 | L0758: 4, L0803: 3,<br>L0779: 3, L0794: 2,<br>L0776: 2, L0789: 2,<br>H0555: 2, L0748: 2,<br>L0731: 2, H0622: 1,<br>L0800: 1, L0809: 1, |
|   | Glu-134 to Val-139, S0250: 4, S0358: 3,  Trp-147 to Lys-161, N0006: 3, H0620: 3,  Ala-163 to Pro-172. H0014: 3, H0656: 2,  L0750: 2, S0212: 1,  H00450: 1, H0549: 1,  H0050: 1, L0471: 1,  H0050: 1, L0471: 1,  H0036: 1, H0628: 1,  H00494: 1, H0520: 1,  L0790: 1, H0520: 1,  L0790: 1, H0520: 1,  L0790: 1, H0520: 1,  L0790: 1, S0032: 1,  L0759: 1, S0032: 1,  L0759: 1, S0434: 1,  L0485: 1, L0595: 1,  R0542: 1, H0543: 1 | Pro-5 to Gly-13,<br>Gly-26 to Gly-34,<br>Leu-49 to Glu-62,<br>Gly-67 to Val-78.  |
|   | 2383   | 2384   |
|   | 2 - 562  | 165 - 398  |
|   | 208  | 209  |
|   | 987577   | 987636   |
|   | 68NNLNH  | HRADQ96  |

| 142857,<br>142858,<br>150270,<br>167250,  | 170261,<br>177900,<br>179450. | 201910,<br>217000, | 222100,<br>233100. | 235200, | 248611, | 256550, | 600202, | 600261, | 601868, | 602280, | 602475 | -                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---|-------------------------------|--------------------|--------------------|---------|---------|---------|---------|---------|---------|---------|--------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   |                               |                    |                    |         |         |         |         |         |         |         |        |                       |                     |                     |                     |                     |                     |                     |                     |                     |
| L0666: 1, H0670: 1,<br>H0648: 1, L0745: 1,<br>L0749: 1, L0759: 1 and<br>L0596: 1. |                               |                    | •                  |         |         |         |         |         |         |         |        | L0731: 29, L0662: 11, | L0666: 9, L0779: 9. | L0758: 9, L0809: 8, | S0360: 7, S0132: 7, | H0046: 7, L0752: 7, | S0040: 6, S0358: 6, | L0803: 6, L0659: 6, | L0748: 6, L0777: 6, | H0599: 5, L0471: 5, |
|   |                               |                    | ,                  |         |         | •       |         |         | -       |         | -      | Asn-85 to Glu-91.     |                     |                     |                     |                     |                     |                     | -<br>· .            |                     |
|   |                               |                    |                    |         |         | ٠       |         |         |         |         |        | 2385                  |                     |                     |                     |                     |                     |                     |                     |                     |
|   | •                             |                    |                    |         |         |         | •       |         |         |         |        | 93 - 776              |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                               |                    |                    |         |         |         |         |         |         |         |        | 210                   |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                               |                    |                    |         |         |         |         |         |         |         |        | 808286                |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                               |                    |                    |         |         |         | ,       |         |         |         |        | HLDCJ16               |                     |                     |                     |                     |                     |                     |                     |                     |

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|--------------------|--------------------|------------------|--------------------|--------------------|--------------------|--------------------|---------------------|------------------|------------------|------------------|------------------|---------------------|--------------------|------------------|------------------|------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|------------------|---------------------|------------------|------------------|---------------------|---------------------|-----------|
|                    |                    |                  |                    |                    |                    |                    |                     |                  |                  |                  |                  | ,                   |                    |                  |                  |                  |                     |                    |                     | _                   |                     |                     |                  |                     |                  |                  |                     |                     |           |
|                    |                    |                  |                    |                    |                    |                    |                     |                  |                  |                  |                  |                     |                    |                  |                  |                  |                     |                    |                     |                     |                     |                     | •                | •                   |                  |                  |                     |                     |           |
| _                  |                    |                  | <del></del>        |                    |                    |                    |                     |                  |                  |                  |                  |                     |                    |                  |                  |                  |                     |                    |                     |                     |                     |                     |                  |                     |                  |                  |                     | <del></del>         |           |
| 564: 5,            | 754: 5,            | 562: 4,          | 251: 4,            | 541: 4,            | 63: 4,             | 396: 4,            | 756: 4,             | 02: 3,           | 600: 3,          | 597: 3,          | 774: 3,          | 46: 3,              | 36: 3,             | 524: 2,          | 717: 2,          | 255: 2,          | 580: 2,             | 717: 2,            | 586: 2,             | 036: 2,             | 024: 2,             | 250: 2,             | 622: 2,          | 66: 2,              | 551: 2,          | 194: 2,          | 02: 2,              | 72: 2,              | .0641: 2, |
| H0616: 5, L0664: 5 | .0744: 5, L0754: 5 | .0749: 5, H0662: | S0476: 4, H0251: 4 | S0022: 4, H0641: 4 | .0806: 4, L0663: 4 | S0126: 4, H0696: 4 | .0439: 4, L0756: 4, | .0362: 4, L0002: | H0411: 3, H0600: | H0013: 3, H0597: | H0231: 3, L0774: | .0805: 3, S0146: 3, | 0759: 3, S0436: 3, | .0603: 3, H0624: | H0170: 2, H0717: | S0212: 2, H0255: | S0418: 2, H0580: 2, | H0729: 2, L0717: 2 | H0592: 2, H0586: 2, | H0575: 2, H0036: 2, | H0590: 2, H0024: 2, | H0373: 2, S0250: 2, | H0039: 2, H0622: | .0483: 2, S0366: 2, | H0038: 2, H0551: | .0564: 2, H0494: | S0352: 2, S0002: 2, | .0770: 2, L0772: 2, | 2, 1.06   |
| H061               | L074               | L0749            | S0476              | S0022              | F080               | S0126              | L0439               | L0362            | H041             | H001             | H023             | T080                | L0759              | T0903            | H017             | S0212            | S0418               | H072               | H059                | H057                | H059                | H037                | H003             | L048                | H003             | L056             | S0352               | 1007                | 1.0800:   |
|                    |                    |                  |                    |                    |                    |                    |                     |                  |                  |                  |                  |                     |                    |                  |                  |                  |                     |                    |                     |                     |                     |                     |                  |                     |                  |                  |                     |                     |           |
|                    |                    |                  |                    |                    |                    |                    |                     |                  |                  |                  |                  |                     |                    |                  |                  |                  |                     |                    |                     |                     |                     |                     |                  |                     |                  | •                |                     |                     |           |
| _                  |                    |                  |                    | •                  |                    |                    |                     |                  |                  |                  |                  |                     |                    |                  | ·                |                  |                     |                    | ·-·· ,              |                     |                     |                     |                  |                     |                  |                  |                     |                     | _         |
| _                  |                    |                  |                    | •                  |                    |                    | ·                   |                  |                  |                  |                  |                     |                    | ·                |                  |                  |                     |                    |                     | ·                   | •                   |                     |                  |                     |                  |                  |                     |                     |           |
|                    |                    |                  |                    |                    |                    |                    |                     |                  |                  |                  |                  |                     | •                  |                  |                  |                  |                     |                    |                     |                     | ٠                   |                     |                  |                     |                  |                  |                     |                     |           |
|                    |                    |                  |                    |                    |                    |                    |                     |                  |                  |                  |                  |                     |                    |                  |                  |                  |                     |                    |                     | -                   |                     |                     |                  |                     |                  |                  |                     |                     |           |
|                    |                    |                  |                    |                    |                    |                    |                     |                  |                  |                  |                  |                     |                    |                  |                  |                  |                     |                    |                     |                     |                     |                     |                  |                     |                  |                  |                     |                     |           |
|                    |                    |                  |                    |                    |                    |                    |                     |                  |                  |                  |                  |                     |                    |                  |                  |                  |                     |                    |                     |                     |                     |                     |                  |                     |                  |                  |                     |                     |           |
|                    |                    |                  |                    |                    |                    |                    |                     |                  |                  |                  |                  |                     |                    | •                |                  |                  |                     |                    |                     |                     |                     |                     |                  |                     |                  |                  |                     |                     |           |
|                    |                    |                  |                    |                    |                    |                    |                     |                  |                  |                  |                  |                     |                    |                  |                  |                  |                     |                    |                     |                     |                     |                     |                  |                     |                  |                  |                     |                     |           |

|                     |                     | •                | ,                   |              |                     |                    |              |                  |                    |              | •            |             |              |                  |             |              |                  |              |                  |             |                  |                  |                  |                  |             |                  | •                |                  |                  |
|---------------------|---------------------|------------------|---------------------|--------------|---------------------|--------------------|--------------|------------------|--------------------|--------------|--------------|-------------|--------------|------------------|-------------|--------------|------------------|--------------|------------------|-------------|------------------|------------------|------------------|------------------|-------------|------------------|------------------|------------------|------------------|
|                     |                     |                  |                     |              |                     |                    |              |                  |                    |              |              |             |              |                  |             |              |                  |              |                  |             |                  |                  |                  |                  |             |                  |                  | -                |                  |
|                     |                     |                  |                     |              |                     |                    |              |                  |                    |              |              |             |              |                  |             |              |                  |              |                  | `           |                  |                  |                  |                  |             |                  |                  |                  |                  |
| 768: 2,             | 144: 2,             | 044: 2,          | 750: 2,             | 1597: 2,     | 592: 2,             | 785: 1,            | 663: 1,      | 0638: 1,         | 376: 1,            | 637: 1,      | 1, H0734: 1, | 0369: 1,    | l, H0441: 1, | 0331: 1,         | H0485: 1,   | T0039: 1,    | 0427: 1,         | 0105: 1,     | 0581: 1,         | 0234: 1,    | 0050: 1,         | 0014: 1,         | 028: 1,          | 1252: 1,         | 0553: 1,    | 0673: 1,         | 364: 1,          | 0591: 1,         | 0413: 1,         |
| .0764: 2, L0768: 2, | .0776: 2, H0144: 2, | H0522: 2, S0044: | .0745: 2, L0750: 2, | H0595: 2, L( | L0590: 2, L0592: 2, | L0599: 2, L0785: 1 | S0001: 1, HC | H0664: 1, H0638: | S0442: 1, S0376: 1 | 30444: 1, HC | H0735: 1, H  | H0437: 1, H | S0222: 1, H( | H0453: 1, H0331: | H0574: 1, H | H0486: 1, T( | H0244: 1, H0427: | H0156: 1, LO | H0318: 1, H0581: | H0196: 1, H | H0546: 1, H0050: | H0105: 1, H0014: | S0388: 1, S6028: | S0318: 1, H0252: | H0428: 1, H | H0644: 1, H0673: | H0674: 1, S0364: | H0708: 1, H0591: | H0412: 1, H0413: |
|                     |                     |                  |                     |              |                     |                    | <u> </u>     |                  | <u> </u>           | <u> </u>     |              |             | <u>.v.</u>   |                  | #           |              | <u> </u>         |              |                  | ,           |                  | <u></u>          | <u> </u>         | <u> </u>         |             |                  | =                |                  |                  |
|                     |                     |                  |                     |              |                     |                    |              |                  |                    |              |              | •           |              |                  |             |              |                  |              |                  |             |                  |                  |                  |                  |             |                  |                  |                  |                  |
|                     |                     |                  |                     |              |                     |                    |              |                  |                    |              |              |             |              |                  |             |              |                  |              |                  |             |                  |                  |                  |                  |             |                  |                  |                  |                  |
|                     |                     |                  |                     |              |                     |                    |              |                  |                    |              |              |             |              |                  |             |              |                  |              |                  |             |                  |                  |                  |                  |             |                  |                  |                  |                  |
|                     |                     |                  |                     |              |                     |                    |              |                  |                    |              |              |             |              |                  |             |              |                  |              |                  |             |                  |                  | 1781             |                  |             |                  |                  |                  |                  |
|                     |                     |                  |                     |              |                     |                    |              |                  |                    |              |              |             |              |                  |             |              |                  |              |                  |             |                  |                  |                  |                  |             |                  |                  |                  |                  |
|                     |                     |                  |                     |              |                     |                    |              |                  |                    |              |              |             |              | •                |             |              |                  |              |                  |             |                  |                  |                  |                  |             |                  |                  |                  |                  |

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|-----------|------------------|------------------|-------------------|---------|-------------------|----------|--------------|----------|----------------|--------------|----------|-------------|-----------|------------------|------------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|--------------------|------------------|--------|
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    |                  |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    |                  |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  | -                 |                  |                  |                    | ,                | •      |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          | -           |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    |                  |        |
| _         |                  |                  |                   | •       |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  | •                |                  |                  |                  |                  | •                 |                  |                  |                    | -<br>pı          |        |
| 2: 1,     | ). 1,            | 3: 1,            | . 1,              | 1,      | . 1,              | k 1,     | : 1 <b>,</b> | . I,     | <del>-</del> i | . 1 <b>.</b> | · - :    | : 1,        | 7: 1,     | 3: 1,            | 8: 1,            | <del>.</del> . | .;<br>T          | : T              | 1: 1,            | <u>, 1</u>       | : 1,             | : 1,             | <del>!</del> 1,  | —<br>—            | <u>۔</u><br>۔:   | Ή,               | : T,               | 5: 1 and         |        |
| 1, S0112: | T0041: 1, H0509: | H0646: 1, S0208: | .0763: 1, L.0769: | 1,0771: | .0773: 1, L.0648: | L0364:   | l, L0533:    | L0807:   | L0782:         | L0647:       | L0665:   | L0565:      | 1, H0547: | H0689: 1, H0683: | H0684: 1, H0658: | , S0380:       | JO602: 1, S0152: | S0013: 1, S0406: | H0555: 1, H0631: | S0432: 1, S0037: | S3014: 1, S0027: | S0028: 1, L0755: | .0757: 1, H0444: | .0596: 1, L.0588: | .0591: 1, L0485: | S0011: 1, S0026: | S0192: 1, S0194: 1 | S0456: 1, H0506: |        |
| 0: 1,     | 1:1,1            | 6: 1,            | 3: 1, I           | 2: 1, 1 | 3: 1, I           |          | 4: 1, ]      | <u>-</u> | Ť              | <u> </u>     |          | 30374: 1, I | 8: 1, ]   | 9: 1,            | 4: 1,            | 0:1,5          | 2: 1, 5          | 3: 1, 5          | 5: 1,            | 2: 1, 5          | 4: 1, 9          | 8: 1, I          | 7: 1, ]          | 6:1,]             | 1: 1, ]          | 1: 1, 5          | 2: 1, 5            | 6: 1, I          | 8: 1.  |
| H0100: 1  | T004             | H064             | 1076              | L0372:  | 1.077             | L0521: 1 | L0794:       | L0379:   | L0512:         | L0384: 1     | L0788: 1 | S037        | L0438:    | H068             | 890H             | S0330: 1       | 0907             | S001.            | H055             | <b>S043</b> ′    | S301             | S002             | L075             | 1059              | L059             | 2001             | S019.              | <b>S045</b>      | H0008: |
|           |                  |                  |                   |         | •                 |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    |                  |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    |                  |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    |                  |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  | -                |                  |                  |                   |                  |                  |                    |                  |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    |                  |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    |                  |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    |                  |        |
| _         |                  |                  |                   |         |                   | •        |              |          |                |              |          |             |           |                  |                  |                |                  |                  | ·                |                  |                  |                  |                  |                   |                  |                  |                    | <u>.</u>         |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    | •                |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    |                  |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    | •                | ,      |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  | -                  |                  |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    |                  |        |
|           |                  |                  |                   |         |                   |          |              |          |                |              |          |             |           |                  |                  |                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                    |                  |        |

| 120070,<br>120131,<br>120131,<br>138030,<br>147545,<br>259900,<br>262000 | 106180,<br>138700,<br>139250,<br>150200,<br>154275,<br>176960,<br>249000,  |  |
|--|--|--|
| 12<br>12<br>13<br>13<br>14<br>14<br>16<br>17                             | 10<br>13<br>13<br>15<br>17<br>17<br>17<br>17<br>17   |  |
| 2q36   | 17923  |  |
| S0386: 1, H0670: 1 and 2q36<br>H0444: 1.                                 | H0549: 2, H0023: 2,<br>H0024: 2, L0750: 2,<br>H0624: 1, L0659: 1,<br>L0809: 1, L0740: 1,<br>L0747: 1 and L0731: 1. | L0766: 5, L0755: 5,<br>L0770: 4, L0659: 4,<br>L0750: 4, L0752: 4,<br>S0360: 3, L0764: 3,<br>L0662: 3, L0774: 3,<br>L0740: 3, L0774: 3,<br>L0759: 3, S0132: 2,<br>H0411: 2, H0188: 2,<br>H0413: 2, L0789: 2,<br>L0805: 2, L0782: 2,<br>L0664: 2, H0144: 2,<br>L0751: 2, L0749: 2,<br>S0194: 2, H0624: 1,<br>H0713: 1, S0218: 1, |
|  | Ala-9 to Phe-15,<br>Gly-44 to Pro-52,<br>Pro-100 to Lys-106.   | Ala-1 to Thr-9, Arg-62 to Trp-77, Arg-176 to Pro-181, Val-191 to Leu-198, Lys-265 to Lys-272, Asn-276 to Val-283.  |
| 2386   | 2387   | 2388   |
| 268 - 603  | 466 - 149  | 2 - 853  |
| 211  | 212  | 213  |
| 987900   | 988159   | 988363   |
| нсорн23  | HEEAQ78  | HOFNY 16   |

|       |   |    |          |                     |                           |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                      |
|-------|---|----|----------|---------------------|---------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|----------------------|
|       |   |    |          |                     | · - <u>.</u> <del>-</del> |                     |                     |                     |                     |                     |                     |                     |                     |                     | <br>                    |                     | •                   |                     | _                   |                     | <del></del>         | •••••               |                     |                     | -                   |                        |           |                      |
| ļ<br> | , |    |          |                     |                           |                     |                     |                     | <u>.</u>            |                     |                     |                     |                     |                     | <br>                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 19q12                |
| _     |   | ٣, | <u>_</u> | H0123: 1, T0023: 1, | H0166: 1, H0038: 1,       | H0551: 1, H0264: 1, | H0059: 1, T0042: 1, | H0494: 1, H0560: 1, | S0440: 1, H0529: 1, | L0762: 1, L0763: 1, | L0769: 1, L0796: 1, | L0637: 1, L0772: 1, | L0646: 1, L0800: 1, | L0771: 1, L0768: 1, | <br>L0661: 1, L0657: 1, | L0532: 1, S0374: 1, | H0520: 1, S0126: 1, | S0122: 1, H0659: 1, | H0658: 1, H0660: 1, | S0404: 1, S0037: 1, | S3014: 1, S0206: 1, | L0748: 1, L0747: 1, | L0756: 1, L0757: 1, | L0758: 1, S0434: 1, | S0436: 1, L0591: 1, | L0608: 1, L0595: 1 and | S0276: 1. | S0436: 10, L0803: 6, |
|       |   |    |          |                     |                           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | His-11 to Pro-18,    |
|       |   |    |          |                     |                           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                        |           | 2389                 |
|       |   |    |          |                     | -                         |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1 - 1458             |
|       |   |    | ,        |                     | ·                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 214                  |
|       |   | •  |          |                     |                           |                     |                     | •                   |                     |                     |                     | . •                 |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 988441               |
|       |   |    |          |                     |                           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HSLCX45              |

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|                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0046: 5, L0754: 5, | L0362: 5, L0794: 4, | L0766: 4, L0749: 4, | L0779: 4, S0444: 3, | L0805: 3, L0527: 3, | H0648: 3, L0439: 3, | L0740: 3, L0747: 3, | L0750: 3, L0777: 3, | L0752: 3, H0671: 2, | S0360: 2, S0408: 2, | H0486: 2, L0105: 2, | T0067: 2, H0059: 2, | H0652: 2, L0770: 2, | L0641: 2, L0662: 2, | L0655: 2, L0783: 2, | L0438: 2, H0520: 2, | H0435: 2, H0659: 2, | S0136: 2, L0731: 2, | L0758: 2, L0759: 2, | S0424: 2, H0717: 1, | S0402: 1, H0657: 1, | H0254: 1, S0348: 1, | S0442: 1, H0722: 1, | S0132: 1, S0476: 1, | H0640: 1, S0300: 1, | L0717: 1, S0278: 1, | S0222: 1, H0587: 1, | H0156: 1, H0575: 1, | T0082: 1, H0318: 1, |
| Arg-40 to Asn-53.   |                     | -                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | <u></u>             |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| S0049: 1, H0052: 1, | H0544: 1, H0545: 1, | H0201: 1, T0010: 1, | l, | H0328: 1, H0428: 1, | H0039: 1, H0622: 1, | L0483: 1, S0364: 1, | H0038: 1, H0551: 1, | <br>L0564: 1, T0041: 1, | H0641: 1, H0529: 1, | L0642: 1, L0764: 1, | L0771: 1, L0364: 1, |     | L0776: 1, L0809: 1, | L0530: 1, L0663: 1, | L0664: 1, H0547: 1, | H0670: 1, H0672: 1, | S0350: 1, S0406: 1, | H0478: 1, S0027: 1, | S0028: 1, L0748: 1, | L0746: 1, L0756: 1, | L0599: 1, H0542: 1, | H0423: 1, H0422: 1 and | L0697: 1. | H0255: 1, H0002: 1, | H0266: 1, L0803: 1, | H0660: 1, L0751: 1 and | L0777: 1. | H0428: 8, L0603: 2 |
|                     |                     |                     |    |                     |                     |                     | -                   |                         |                     |                     |                     |     |                     |                     |                     | <u>.</u>            |                     |                     |                     |                     |                     |                        |           | Gln-10 to Lys-15,   | Pro-28 to Gln-33.   |                        |           | Tyr-18 to Lys-23,  |
|                     |                     |                     |    |                     |                     |                     |                     |                         |                     |                     |                     |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2390                |                     |                        | :         | 2391               |
|                     |                     |                     |    |                     |                     |                     |                     |                         |                     |                     |                     |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 249 - 506           |                     |                        |           | 113 - 724          |
|                     |                     |                     |    |                     |                     |                     |                     |                         |                     |                     |                     |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 215                 |                     |                        | ,         | 216                |
|                     |                     |                     |    |                     | :                   |                     |                     |                         |                     |                     |                     |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 988499              |                     |                        | :         | 988526             |
|                     | ٠.                  |                     |    |                     |                     |                     |                     |                         |                     |                     |                     |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HLMJB09             |                     |                        |           | HOVEF60            |

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|                   |                   | 13                |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     | _                   |                     | ,                   | -                   |                     | •                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |
| and S0114: 1.     |                   | 8,                | L0769: 7, H0038: 6, | L0439: 6, L0750: 6, | L0752: 6, L0758: 6, | S0360: 5, L0775: 5, | S0406: 5, H0150: 4, | L0157: 4, H0620: 4, | H0087: 4, S0440: 4, | S0344: 4, L0763: 4, | S0328: 4, L0747: 4, | H0224: 3, H0484: 3, | H0402: 3, S0049: 3, | H0708: 3, L0773: 3, | L0805: 3, L0809: 3, | L0519: 3, H0670: 3, | L0748: 3, L0731: 3, | L0757: 3, L0581: 3, | H0295: 2, H0341: 2, | S0444: 2, S0222: 2, | L0622: 2, H0253: 2, | H0309: 2, T0115: 2, | H0544: 2, H0545: 2, | H0081: 2, H0012: 2, | H0673: 2, S0036: 2, | H0616: 2, L0770: 2, | L0518: 2, H0725: 2, | S0374: 2, H0696: 2, | L0588: 2, H0543: 2, |
| Pro-32 to Arg-44, | Pro-51 to Gly-56. | Lys-56 to Leu-70, | Gln-85 to Ala-91,   | Met-123 to Asn-     | 133.                | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |                   | 2392              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |                   | 2-415             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | :                   |                     |
|                   |                   | 217               | ,                   |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |
|                   |                   | 988536            | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ·                 |                   | HOGDR72           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| L0615: 1, H0160: 1, | H0225: 1, H0713: 1, | S6024: 1, S0430: 1, | H0656: 1, S0116: 1, | S0212: 1, H0483: 1, | H0306: 1, H0638: 1, | H0125: 1, S0420: 1, | S0358: 1, S0408: 1, | H0637: 1, S0476: 1, | H0640: 1, H0411: 1, | S0278: 1, H0441: 1, | H0461: 1, H0298: 1, | H0333: 1, L0623: 1, | H0486: 1, H0427: 1, | H0156: 1, H0599: 1, | T0082: 1, T0048: 1, | H0318: 1, H0581: 1, | H0196: 1, H0597: 1, | L0738: 1, H0530: 1, | H0242: 1, H0024: 1, | H0373: 1, L0163: 1, | H0275: 1, H0188: 1, | H0284: 1, S0003: 1, | H0428: 1, H0213: 1, | H0405: 1, H0181: 1, | H0182: 1, H0606: 1, | L0055: 1, H0163: 1, | H0063: 1, T0067: 1, | H0100: 1, H0560: 1, | H0561: 1, H0647: 1, |
|                     |                     |                     | <u> </u>            | <u> </u>            |                     |                     | <u> </u>            |                     |                     | <u></u>             | ,                   |                     |                     |                     | <b>.</b>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | ٠                   |                     |                     |                     |                     |                     |                     |
|                     |                     | <del> </del>        |                     | -                   | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | `                   | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     | •                   | <u></u>             |                     |                     |                     | •                   |
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| S0142: 1, L0598: 1, | L3904: 1, L0/61: 1,<br>L0772: 1, L0764: 1. | `^ |   | _ |   | L0776: 1, L0517: 1, | L0526: 1, L0783: 1, | L0789: 1, H0144: 1, | L0438: 1, H0689: 1, | H0690: 1, H0682: 1, | H0683: 1, H0435: 1, | H0659: 1, H0648: 1, | H0521: 1, H0522: 1, | S3014: 1, S0027: 1, | L0755: 1, L0759: 1, | H0445: 1, H0343: 1, | H0595: 1, L0608: 1, | H0136: 1, S0276: 1, | H0542: 1, L0600: 1 and | H0352: 1. | S0328: 4, L0731: 3, | S0356: 2, H0013: 2, | L0794: 2, L0649: 2, | H0435: 2, L0748: 2, | L0749: 2, L0750: 2, | L0758: 2, L0592: 2, | H0685: 1, S0420: 1, | S0360: 1, H0575: 1, |
|                     |  | •  | • |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Gly-1 to Ser-20,    | Phe-29 to Asn-37,   | Asn-55 to Tyr-64,   | Ala-69 to Asp-78,   | Tyr-82 to Ala-91,   | Lys-100 to Glu-122. |                     |                     |
|                     |  |    |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2393                |                     |                     |                     |                     |                     |                     |                     |
|                     |  |    |   |   | • |                     |                     |                     |                     | •                   |                     |                     |                     |                     | •                   |                     |                     |                     |                        |           | 1 - 366             |                     |                     |                     |                     |                     |                     |                     |
|                     |  |    |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                        |           | 218                 |                     |                     |                     |                     |                     |                     |                     |
|                     |  |    |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 988556              |                     |                     | ,                   |                     |                     |                     |                     |
|                     |  |    |   | • |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HOCMF20             |                     |                     |                     |                     |                     |                     |                     |

|  |  | 100730,<br>118800,<br>123660,<br>135600,<br>157655,<br>186860,<br>201460,<br>205100,<br>205100,<br>262000,<br>600258,<br>601277,   |
|--|--|--|
|  |  | 2q33-q34   |
| L0471: 1, S0362: 1,<br>H0030: 1, H0031: 1,<br>H0068: 1, H0038: 1,<br>H0412: 1, H0413: 1,<br>L0768: 1, L0766: 1,<br>L0658: 1, L0766: 1,<br>H0144: 1, H0547: 1,<br>S0126: 1, H0659: 1,<br>H0660: 1, S0027: 1,<br>L0754: 1, L0786: 1,<br>L0779: 1, L0755: 1 and | H0618: 1, H0081: 1, C0010: 1, H0560: 1, L0763: 1, L0803: 1 and L0790: 1. | S0212: 20, L0751: 14,<br>L0663: 11, L0731: 11,<br>H0083: 10, L0657: 10,<br>L0666: 10, H0547: 10,<br>H0550: 7, H0620: 6,<br>L0769: 6, H0689: 6,<br>H0123: 5, H0428: 5,<br>L0662: 5, S0356: 4,<br>H0520: 4, L0664: 4,<br>H0520: 4, H0670: 4,<br>L0581: 4, S0418: 3,<br>L0717: 3, H0618: 3, |
|  | <u> Fri</u>  |  |
|  | Ala-12 to Asn-18.  |  |
|  | 2394   | 2395   |
|  | 309 - 773  | 3 - 659  |
|  | 219  | 220  |
|  | 988737   | 988904   |
|  | НАМНН26  | ННГОХ44  |

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|                    |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |              | . —                 |                     |                     |                     |                     | -                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | _                |
|                    |                    |                     |                     |                    |                     |                     |                     |                     | Í                   |                     |                     |              |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  | :                |                  |
| ·<br>              |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |              |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                    | χ,                 |                     | - <b>-</b> ^        | ~ໂ                 | حرُ                 |                     | ٠,                  | ς,                  | حرث                 | ત્રં                | م                   | - S          | -5                  | ٠,                  |                     | 2,                  |                     | ~î                 | 1,               | 1,               |                  |                  |                  | •                |                  |                  |                  | 1,               | 1,               |
| 559: 3             | .099               | 758: 3              | 543: 3              | 295: (             | 662: 7              | 360: 2              | 408:2               | 051: (              | (87:                | 031: (              | 100:                | L0648: 2,    | 774: 2              | 565: 2              | 126: 2              | 672:                | 106:2               | 505: 2             | 170:             | 685:             | 180:             | 661: ]           | 420: ]           | 354: 1           | 637: ]           | 007: 1           | 645:             | 391:             | 331:             |
| 3, 1.0             | 3, H0              | 3, LO               | 3, HO               | 2, H0              | 2, H0               | 2, S0               | 2, S0               | 2, H0               | 2, H0               | 2, H0               | 2, H0               | 2, L0        | 2, 1.0              | 2,10                | 2, S0               | 2, HC               | 2, SQ               | 2,10               | 2, HC            | 1, HC            | 1, S0            | 1, H0            | 1, S0            | 1, SO            | 1, H0            | 1, S0            | 1, HC            | 1, HC            | 1, HC            |
| .0770: 3, L0659: 3 | H0683: 3, H0660: 3 | .0747: 3, L0758: 3, | S0434: 3, H0543: 3, | H0624: 2, H0295: 2 | H0341: 2, H0662: 2, | S0358: 2, S0360: 2, | H0675: 2, S0408: 2, | H0251: 2, H0051: 2, | H0594: 2, H0687: 2, | H0031: 2, H0031: 2, | H0413: 2, H0100: 2, | .0637: 2,    | .0803: 2, L0774: 2, | .0783: 2, L0665: 2, | 30374: 2, S0126: 2, | H0658: 2, H0672: 2, | S0378: 2, S0406: 2, | .0439: 2, L0605: 2 | H0352: 2, H0170: | H0686: 1, H0685: | H0294: 1, S0180: | S0298: 1, H0661: | H0664: 1, S0420: | S0442: 1, S0354: | S0376: 1, H0637: | H0329: 1, S0007: | H0208: 1, H0645: | H0549: 1, H0391: | H0392: 1, H0331: |
| 12                 | Ħ                  | <u>김</u>            | S                   | 王                  | 王                   | SC                  | Ĭ                   | Ħ                   | Ħ                   | Ĭ                   | Ħ                   | <u> </u>     | <u> </u>            | <u> </u>            | S                   | Ĭ                   | <u>8</u>            | <u> </u>           | Ħ                | 王                | 王                | <u>8</u>         | 耳                | <u>8</u>         | <u>8</u>         | Ĭ                | 耳                | Ξ                | Ħ                |
|                    |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |              |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                    |                    |                     |                     |                    |                     |                     |                     | •                   |                     |                     |                     |              |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                    |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |              |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                    |                    |                     |                     |                    |                     |                     |                     |                     |                     | •                   |                     |              |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  | -                |                  |                  |                  |
|                    | _                  |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     | <del>.</del> | - ;-                |                     | _                   |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  | <del>.</del>     |                  |
|                    |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |              |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                    |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     | _                   |              |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
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| H0632: 1, T0109: 1,<br>H0575: 1, H0545: 1, | H0009: 1, H0024: 1,<br>H0057: 1, H0373: 1, | H0188: 1, H0288: 1, | H0286: 1, H0644: 1, | H0617: 1, H0606: 1,<br>H0087: 1, L0564: 1. | S0440: 1, L0772: 1, | L0374: 1, L0794: 1, | L0652: 1, L0653: 1, | L0809: 1, L0543: 1, | H0693: 1, H0593: 1, | H0690: 1, H0682: 1, | H0684: 1, H0666: 1, | S0330: 1, S0380: 1, | H0696: 1, H0555: 1, | S0027: 1, L0748: 1, | L0750: 1, L0779: 1, | L0755: 1, L0759: 1, | H0445: 1, S0436: 1, | L0597: 1, L0599: 1, | H0542: 1 and S0384: 1. | AR055: 8, AR096: 4, | AR053: 4, AR104: 3, | AR089: 3, AR061: 3, | AR039: 3, AR060: 3, | AR033: 3, AR052: 1 | L0777: 4, H0052: 3, | L0438: 2, L0748: 2, |
|  |  |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Met-1 to Ile-6,     | Cys-13 to Ser-20,   | Asp-40 to Ser-46,   | Asp-48 to Ser-62,   | Ser-70 to Tyr-80,  | Glu-83 to Ser-89,   | Leu-108 to Ser-119, |
|  |  | ,                   |                     | <u> </u>                                   |                     | _                   |                     | -                   |                     | -                   |                     | <u> </u>            |                     |                     |                     |                     | _                   |                     |                        | 1 - 2127 2396       |                     |                     |                     | •                  |                     |                     |
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| 1,<br>11,<br>11,<br>11,<br>11,<br>11,<br>11,   | 05: 15,<br>5: 14,<br>0: 11,<br>7: 11,<br>7,<br>7,<br>7,<br>6,<br>5,<br>5,<br>5,  |
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| SO212: 1, SO376: 1,<br>H0438: 1, H0318: 1,<br>L0471: 1, H0375: 1,<br>H0038: 1, H0551: 1,<br>L0763: 1, L0764: 1,<br>L0775: 1, L0794: 1,<br>L0775: 1, L0805: 1,<br>L0653: 1, H0648: 1,<br>S0044: 1, L0742: 1,<br>L0439: 1, L0747: 1,<br>H0445: 1, L0590: 1 and   | H0556: 17, H0305: 15, S0414: 14, L0665: 14, H0402: 12, S0360: 11, L0776: 11, L0766: 9, L0664: 9, L0662: 8, L0754: 8, S0408: 7, L0768: 7, L0768: 7, L0768: 7, L0668: 7, L0768: 7, L0668: 7, L0668: 7, L0778: 7, H0422: 7, L0803: 6, L0770: 5, L0659: 5, L0770: 5, L0731: 5, H0423: 5, H0423: 5, H0265: 4, H0423: 5, H0265: 4, |
| Cys-138 to Trp-154, S0212: 1, S0376: 1 Glu-198 to Val-227, H0438: 1, H0318: Lys-251 to Asp-264, L0471: 1, H0375: 1 Asp-407 to Glu-415, H0038: 1, H0551: Ile-456 to Val-462, L0763: 1, L0764: 1 Ser-470 to His-476, L0767: 1, L0794: 1 Phe-478 to Ser-492, L0775: 1, L0805: 1 Arg-500 to Asp-507, L0653: 1, H0648: 1 Leu-638 to Leu-648, L0439: 1, L0747: 1 Lys-667 to Asn-673, L0750: 1, S0031: 1 Trp-684 to Ile-691, H0445: 1, L0590: Ser-698 to Glu-709. H0543: 1. |  |
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| H0306: 4, S0280: 4, | H0644: 4, H0169: 4, | .0775: 4, H0672: 4, | S0330: 4, H0710: 4, | H0522: 4, S0027: 4, | .0744: 4, L.0747: 4, | H0170: 3, H0341: 3,                               | H0255: 3, S0132: 3, | H0411: 3, H0549: 3, | 10060: 3, H0581: 3, | H0309: 3, H0594: 3, | H0615: 3, L0483: 3, | H0674: 3, H0063: 3, | H0494: 3, L0769: 3, | .0761: 3, L0771: 3, | J0653: 3, L0809: 3, | 0374: 3, S0126: 3, | H0670: 3, H0436: 3, | ,0750: 3, L0779: 3, | .0780: 3, H0506: 3, | H0624: 2, H0295: 2, | Г0049: 2, H0583: 2, | H0650: 2, H0656: 2, | H0669: 2, H0661: 2, | H0663: 2, H0589: 2, | S0476: 2, S0278: 2, | S6022: 2, H0431: 2, | H0574: 2, L0021: 2, | H0274: 2, H0545: 2, | .0471: 2, H0051: 2, |
|                     | <u> </u>            |                     | <u> </u>            |                     |                      | <del>                                      </del> |                     | <u> </u>            |                     | <u> </u>            | <u> </u>            | <del>- 14</del>     | <u> </u>            | <u>- 1</u> 1.       |                     |                    |                     |                     |                     | <u> </u>            | <b></b> .           | <b>.</b>            |                     |                     | <u> </u>            |                     |                     |                     | I .                 |
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| (0284: 2, H0428: 2, 10135: 2, H0090: 2, 10591: 2, H0509: 2, 10412: 2, H0509: 2, 0762: 2, L0551: 2, L0551: 2, L0532: 2, 0778: 2, L0532: 2, 0555: 2, H0690: 2, 10555: 2, | 10455: 2, H0551: 2<br>30378: 2, S0380: 2,<br>20743: 2, L0439: 2,<br>20753: 2, L0757: 2,<br>50434: 2, L0361: 2, | 46.1<br>13.1<br>14.1<br>14.1   | 16: 1<br>82: 1<br>338:<br>56: 1<br>80: 1   | S0222: 1<br>H0409:<br>H0586:<br>H0497:                              |
| H04<br>H04<br>H05<br>L05<br>L05<br>H06<br>H06  | S033<br>104<br>103<br>103<br>103   | S00<br>H07<br>S01  | S01<br>S02<br>H05<br>H05   | S0222:<br>H0409:<br>H0586:<br>H0497:                                |
| 10284: 2, H0428: 10135: 2, H0428: 10591: 2, H0477: 10412: 2, H0509: 0144: 2, L0598: 0762: 2, L0638: 0774: 2, L0851: 0778: 2, L0532: 0778: 2, L0532: 0555: 2, H0690: 0565: 2, H |  | . 2. 2. 2. 4.<br>. 2. 1. 1. 1.   |  | .0394: 1, S0222: 10392: 1, H0409: 10602: 1, H0586: 10587: 1, H0497: |
| H0284: 2, H0428: 2, H0281: 2, H0135: 2, H0090: 2, H0412: 2, H0599: 2, L0762: 2, L0581: 2, L0521: 2, L0551: 2, L0565: | H0435: 2, H0551: 2, S0378: 2, S0378: 2, L0439: 2, L0753: 2, L0757: 2, S0434: 2, L0361: 2, S0026: 2, H0640: 3   | S0020: 2, R0342: 2<br>H0352: 2, S0040: 1<br>S0342: 1, H0713: 1<br>H0717: 1, H0716: 1<br>H0294: 1, S0114: 1 | S0134: 1, S0116: 1<br>S0298: 1, S0282: 1<br>H0662: 1, H0638:<br>S0420: 1, S0356: 1<br>S0354: 1, H0580:<br>H0619: 1, L0717: | 1, S0222: 1<br>10392: 1, H0409: H0602: 1, H0586: H0587: 1, H0497:   |
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| H0333: 1, H0331:<br>H0013: 1, H0244: | H0427: 1, H0599:<br>H0706: 1, S0010: | S0346: 1, H0318: | 10251: 1, H0123:<br>10012: 1, H0620: | T0003: 1, S0050: | H0014: 1, S0024: | H0239: 1, H0510: | H0247: 1, H0271: 1 | HO188: 1, H0028: | S0250: 1, S0003: | H0328: 1, T0023: | H0031: 1, H0553: | H0628: 1, H0040: | H0634: 1, H0087: | H0551: 1, T0067: | H0488: 1, H0623: | H0059: 1, H0561: | S0440: 1, H0131: | H0633: 1, H0652: | S0142: 1, S0344: | S0210: 1, H0529: | 0646:  | .0765: 1, L0648: | .0767: 1, L0794: | L0650:     | .0375: 1, L0651; | 1, L0654: |
| 田 田 :<br>-: -: :                     | : 1, E                               | 1, H             | Ξ Ξ.<br>Ξ Ξ.                         | : 1, S(          | : 1, S           | : 1, H           | : 1, H             | : 1, H           | : 1, S(          | : 1, T           | : 1, H           | : 1, H           | : 1, H           | : 1, T           | : 1, H           | : 1, H           | : 1, H           | : 1, H           | : 1, S(          | : 1, H           | : 1, L | : 1, L           | : 1, L           | : 1, L     | : 1,L            | 1.1       |
| H0333: 1<br>H0013: 1                 | 10427<br>10706                       | 0346             | (025)<br>(0012                       | 0003             | 10014            | [0239            | [0247              | 10188            | 0220             | 10328            | 1003             | 10628            | 10634            | 10551            | 10488            | 10059            | 949              | 10633            | 0142             | 0210             | 0550   | 29/0             | 7970             | .0649: 1,] | 0375             | .9080     |
|                                      | <u> </u>                             | S                | <u> </u>                             | E                | <u> </u>         | <u> </u>         | <u> </u>           | <u> </u>         | S                | <u>II.</u>       | <u>II</u>        | <u> </u>         | <u> 111</u>      | <u>;1;</u>       | <u> </u>         | <u>;11;</u>      | S                | <u>;44;</u>      | S                | S                | ᆜ      |                  |                  | <u> </u>   |                  | ابر       |
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| L0657: 1, L0656: 1, | L0782: 1, L0647: 1, | L0788: 1, L2269: 1, | H0697: 1, H0691: 1, | H0693: 1, L0352: 1, | H0547: 1, H0689: 1, | H0659: 1, H0658: 1, | S0152: 1, H0525: 1, | H0521: 1, S0013: 1, | H0704: 1, H0694: 1, | H0555: 1, S0206: 1, | L0740: 1, L0749: 1, | L0755: 1, L0759: 1, | S0031: 1, H0445: 1, | H0343: 1, H0595: 1, | S0436: 1, L0599: 1, | L0603: 1, S0192: 1, | S0276: 1, S0196: 1, | H0677: 1 and H0008: 1. | L0768: 5, L0766: 3, | L0769: 2, L0748: 2, | L0750: 2, L0758: 2, | H0663: 1, S0420: 1, | S0360: 1, H0675: 1, | H0486: 1, H0596: 1, | H0179: 1, H0328: 1, | L0363: 1, L0806: 1, | L0809: 1, H0658: 1, | L0747: 1, L0777: 1, | L0731: 1 and H0352: 1. |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     | •                   |                     |                     | ٠                   |                        | His-7 to Lys-14.    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |
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|  |   | 277900,<br>600631   |
|  |   | 13q14.3   |
| L0777: 7, L0766: 5,<br>L0663: 3, H0660: 3,<br>L0752: 3, L0758: 3,<br>H0650: 2, H0124: 2,<br>L0646: 2, L0740: 2,<br>H0445: 2, L0788: 2,<br>L0485: 2, S0424: 2,<br>H0657: 1, H0341: 1,<br>S0046: 1, H0342: 1,<br>H0086: 1, L0477: 1,<br>H0089: 1, H0373: 1,<br>H0494: 1, S0150: 1,<br>L0764: 1, L0662: 1,<br>L0768: 1, L0763: 1,<br>L0768: 1, L0763: 1,<br>L0768: 1, L0763: 1,<br>L0768: 1, L0763: 1,<br>L0768: 1, L0665: 1,<br>L0659: 1, L0666: 1,<br>L0659: 1, H0144: 1,<br>S0126: 1, H0659: 1,<br>H0648: 1, S0130: 1, | H0436: 1, S0390: 1,<br>L0581: 1 and H0668: 1. | H0171: 1, H0341: 1,<br>L0157: 1, H0083: 1,<br>H0068: 1, H0038: 1, |
| Ser-75 to Ala-92, Ala-106 to Met-123, Pro-125 to Gln-131, Asp-175 to Asn- 182, Val-197 to Arg-224.   |   |   |
| 2399   |   | 2400  |
| 460 - 1173   |   | 303 - 452   |
| 224  |   | 225   |
| 989321   |   | 989323  |
| HOOJB32  |   | HMWJJ35   |

| H0616: 1 and L0519: 1. | L0438: 4, L0754: 4,<br>H0521: 3, H0624: 2,<br>S0356: 2, S0132: 2,<br>L0803: 2, L0806: 2,<br>L0439: 2, L0749: 2,<br>L0779: 2, L0759: 2,<br>H0556: 1, H0661: 1,<br>S0376: 1, H0548: 1,<br>H0586: 1, H0548: 1,<br>H0586: 1, H0548: 1,<br>H0594: 1, S6028: 1,<br>S0003: 1, H0622: 1,<br>H0050: 1, H0622: 1,<br>H0050: 1, L0773: 1,<br>L0369: 1, L0373: 1,<br>L0776: 1, L0653: 1,<br>L0776: 1, L0653: 1,<br>H0539: 1, S0328: 1,<br>H0539: 1, S0328: 1,<br>L0776: 1, L0653: 1,<br>L0776: 1, L0653: 1,<br>L0776: 1, L0653: 1,<br>L0776: 1, L0653: 1,<br>L0776: 1, L0653: 1,<br>L0776: 1, L0653: 1, | L0604: 1 and H0542: 1. |  |
|------------------------|---|------------------------|--|
|                        | Phe-2 to Cys-10.  |                        | Pro-26 to Glu-49,<br>Asp-58 to Pro-63. |
|                        | 2401  |                        | 2402                                   |
|                        | 105 - 188   |                        | 71 - 259                               |
|                        | 226   |                        | 227                                    |
|                        | 988396  |                        | 209686                                 |
|                        | HHFIA95   |                        | HSPSH36                                |

|                    |               |                   |                   |                   |                    |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |
|--------------------|---------------|-------------------|-------------------|-------------------|--------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 133700,            | 133700,       | 150230,           | 190080,           | 190350            |                    |                     |                     | •                   |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |
| 8q24.12-           | q24.13        |                   |                   |                   |                    |                     |                     |                     |                     |                      |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0318: 1, H0646: 1 | and L0366: 1. |                   |                   |                   |                    |                     |                     |                     |                     | L0777: 10, H0616: 4, | L0758: 4, L0761: 3, | L0766: 3, H0648: 3, | L0749: 3, L0750: 3, | L0755: 3, H0318: 2, | H0545: 2, H0373: 2, | H0038: 2, S0438: 2, | S0422: 2, L0774: 2, | L0375: 2, L0657: 2, | L0518: 2, H0659: 2, | L0731: 2, L0759: 2, | H0685: 1, H0294: 1, | H0656: 1, L0808: 1, | S0420: 1, H0586: 1, | L0622: 1, H0486: 1, | T0082: 1, S0010: 1, | S0049: 1, L0471: 1, | H0615: 1, L0520: 1, | L0762: 1, L0763: 1, | L0770: 1, L0769: 1, |
| Lys-14 to Glu-23,  |               | Ser-45 to His-54, | Thr-66 to Tyr-71, | Pro-75 to Asp-80, | Ile-98 to Thr-120, | Glu-125 to Lys-133, | Leu-146 to Ala-152, | Ala-170 to Ile-176, | Asp-180 to Cys-200. | His-8 to Ser-15,     | Ser-21 to Gly-32,   | Arg-51 to Ala-57,   | Phe-71 to Leu-78,   | Gly-87 to Glu-92.   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 2403               |               |                   |                   |                   |                    |                     |                     |                     |                     | 2404                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 1136 - 534         |               |                   |                   |                   |                    |                     |                     |                     |                     | 268 - 645            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 228                |               |                   |                   |                   |                    |                     |                     |                     |                     | 229                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |
| 989952             |               |                   |                   |                   |                    |                     |                     |                     | •                   | 090066               |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| HAAAA25            |               |                   |                   |                   |                    |                     |                     |                     |                     | HTEMJ16              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| L0372: 1, L0646: 1,<br>L0767: 1, L0768: 1,<br>L0803: 1, L0776: 1,<br>L0658: 1, L0666: 1,<br>L0368: 1, L0666: 1,<br>L0664: 1, L0665: 1,<br>H0682: 1, H0658: 1,<br>H0666: 1, S0330: 1,<br>S0406: 1, S0027: 1,<br>L0747: 1, L0779: 1,<br>L0780: 1, L0753: 1 and | L0748: 6, L0774: 4,<br>L0439: 4, L0749: 4,<br>L0764: 3, L0749: 4,<br>L0775: 3, L0665: 3,<br>S0408: 2, H0644: 2,<br>L0766: 2, L0649: 2,<br>S0374: 2, L0747: 2,<br>S0282: 1, H0662: 1,<br>H0586: 1, H0156: 1,<br>H0586: 1, H0156: 1,<br>L0021: 1, H0239: 1,<br>H0695: 1, L0762: 1,<br>L0761: 1, L0648: 1,<br>L0803: 1, L0663: 1,<br>H0689: 1, H0658: 1, |
|--|---|
|  | Glu-1 to Val-14, Arg-123 to Gly-128.L S S S S S S E H H H H H H H H H H H H H   |
|  | 2405  |
|  | 2 - 682   |
|  |   |
|  | 990146  |
|  | HWLAB90   |

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|   |  |                       |                       |                     | , |                     |                     |                     |                     |                     | •                      |                      |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |
| S0044: 1, L0755: 1,<br>L0758: 1 and H0423: 1. | AR089: 23, AR096:<br>19, AR039: 16, AR052: | 16, AR060: 13, AR033: | 11, AR055: 10, AR104: | 9, AR053: 4, AR061: | 3 | H0024: 2, L0594: 2, | H0542: 2, H0657: 1, | S0214: 1, L0761: 1, | L0766: 1, H0435: 1, | H0658: 1, S0380: 1, | L0753: 1 and L0759: 1. | H0617: 10, S0126: 7, | S0404: 5, L0747: 5, | L0779: 5, H0253: 4, | H0545: 4, L0766: 4,                     | S0328: 4, L0742: 4, | L0752: 4, H0686: 3, | S0420: 3, S0358: 3, | S0046: 3, S0278: 3, | H0592: 3, H0618: 3, | H0100: 3, L0769: 3, | H0519: 3, L0743: 3, | L0758: 3, H0341: 2, | H0484: 2, H0333: 2, | H0327: 2, H0544: 2, | H0046: 2, H0594: 2, | T0042: 2, H0494: 2, |
|   | Gln-81 to Cys-86,<br>Lys-170 to Asp-181.   | •                     |                       |                     |   |                     |                     |                     |                     |                     |                        | Gly-1 to Gln-11,     | Pro-111 to Pro-126, | Lys-174 to Ser-179, | Leu-181 to Leu-190. H0545: 4, L0766: 4, |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 2406                                       |                       |                       |                     |   |                     |                     |                     |                     |                     |                        | 2407                 |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |
|   | 2 - 790                                    |                       |                       |                     |   |                     |                     |                     |                     |                     | •                      | 761 - 165            |                     |                     |   |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 231  |                       |                       |                     |   |                     |                     |                     |                     |                     | -                      | 232                  |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 990184                                     |                       |                       | _                   |   |                     |                     |                     |                     |                     |                        | 990254               |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | HOSED43                                    |                       |                       |                     |   |                     |                     |                     |                     |                     |                        | HNODF50              |                     |                     |   |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |

|                     | -                   |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|---------------------|---------------------|---------------------|------------------|---------------------|---------------------|---------------------|--------------------|------------------|------------------|------------------|--------------------|----------|------------|------------------|------------|------------------|-----------------|-----------|----------|--------------|--------|------------|----------------|----------|-----------|-----------|------------------|-----------|--------------|
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              | •      |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
| ١.                  |                     | •                   | ٠.               |                     | •                   | •                   |                    | ં<br>            |                  | •                |                    |          |            |                  |            | ثــ .            | ŗ               | •         | ŗ        |              |        | <u>_</u> , |                |          |           | ئ_ `      | •                | •         | <u>,</u>     |
| 33: 2               | .0761: 2, L0764: 2, | 32:2                | 35: 2            | 30:2                | 36:2                | 55: 2               | 43:2               | 24: 1            | 57: 1            | 82: 1            | 63: 1              | 59: 1    | 1.13       | 51: 1            | 20: 1      | 86: 1            | 23: 1           | 69: 1     | 75: 1    |              | 46: ]  | 99:        | H0024: 1       | 10:1     | 84: ]     | 88: 1     | 94: 1            | H0213: 1  | 4            |
| 1.07                | 107                 | L05                 | .0665: 2, H0435: | S03.                | S02                 | 1.07                | H05                | H06              | H06              | <b>S02</b>       | 90H                | H04      | S035       | H03              | 1, S0220:  | H05              | 106             | 1, H0069: | , H0575: | H0309:       | H05    | H0006:     | H00            | H0510:   | l, H0284: | H0688:    | 101              | H02       | H0644        |
| 5: 2,               | 1:2,                | 9:2,                | 5: 2,            | 1:2,                | 9:2,                | 1:2,                | 5:2,               | 2: 2,            | 1:1,             | 6: 1,            | 9: 1,              | 2: 1,    | 3: 1,      | 3: 1,            | 5: 1,      | 0: 1,            | 7: 1,           | 4: 1,     | <b>_</b> |              | Ξ,     | <b>—</b>   | <del>-</del> - | <u>_</u> |           |           | 8: 1,            | 6: 1,     | 3: 1,        |
| S0426: 2, L0763: 2, | 920                 | .0519: 2, L0532: 2, | ,990             | H0651: 2, S0330: 2, | H0539: 2, S0206: 2, | .0751: 2, L.0755: 2 | S0106: 2, H0543: 2 | H0422: 2, H0624: | H0171: 1, H0657: | H0656: 1, S0282: | S0029: 1, H0663: 1 | 990F     | 30418      | H0393: 1, H0351: | 36016:     | H0370: 1, H0586: | 1049            | [0114: ]  | .0021:   | H0052:       | H0231: | H0041:     | H0050:         | .0163:   | H0266:    | H0286: 1, | H0428: 1, L0194: | r0006: 1, | H0553:       |
| S                   | <u>, 11.</u>        | <u> </u>            | <u>,</u> -       | <u> </u>            | <u>+-</u>           | <u> </u>            | <u>(7)</u>         | <u>. 1</u>       | بكر              | بنر              | (/)                | <u> </u> | <i>(</i> ) | <u> </u>         | <u>(7)</u> | _ <u>+</u> _     | . <del>14</del> | _         | <u> </u> | <u>, 141</u> |        |            | <u>щ</u>       | <u> </u> | إسليو     |           | <u> </u>         |           | <u>, 111</u> |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           | ٠         |                  |           |              |
| '                   |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
| Ŀ                   |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
| <u> </u>            |                     | ·                   |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            | <u></u>          |                 |           |          |              |        |            |                |          |           | _         |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  | •                |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  | <u> </u>         |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            | •              |          |           |           |                  |           |              |
|                     | •                   |                     |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           |           |                  |           |              |
|                     |                     | _                   |                  |                     |                     |                     |                    |                  |                  |                  |                    |          |            |                  |            |                  |                 |           |          |              |        |            |                |          |           | _         |                  |           |              |

|              |             |              |                    |           |                  |              |           |              |           |            | -         |           |           |           |           |           |           |              |                  |                  | <u> </u>  |                  |                  |              |           |           |                  | •                |                  |
|--------------|-------------|--------------|--------------------|-----------|------------------|--------------|-----------|--------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------|------------------|------------------|-----------|------------------|------------------|--------------|-----------|-----------|------------------|------------------|------------------|
|              |             | 121.         |                    |           |                  |              |           |              |           |            |           |           |           |           | _         |           |           |              | · · ·            |                  |           |                  |                  |              |           |           |                  |                  |                  |
|              |             |              |                    |           |                  |              |           |              |           |            |           |           | -         |           |           |           |           |              | <del></del>      |                  |           |                  |                  |              |           |           |                  | <u> </u>         |                  |
| 1, H0181: 1, | , S0036: 1, | l, H0634: 1, | H0087: 1,          | T0041: 1, | H0509: 1,        | 1, S0144: 1, | H0538: 1, | 1, L0520: 1, | L0643: 1, | ,L0773: 1, | L0794: 1, | L0774: 1, | L0527: 1, | L0515: 1, | L0517: 1, | L0545: 1, | L0664: 1, | 1, H0689: 1, | H0682: 1,        | H0670: 1,        | S0146: 1, | H0576: 1,        | S0037: 1,        | 1, L0748: 1, | L0749: 1, | S0031: 1, | L0596: 1,        | H0667: 1,        | S0194: 1,        |
| H0628: 1,    | H0598: 1,   | H0040: 1,    | H0616: 1, H0087: 1 | H0059: 1, | H0561: 1, H0509: | H0647: 1,    | S0142: 1, | S0002: 1,    | L0772: 1, | L0771: 1,  | L0662: 1, | L0386: 1, | L0776: 1, | L0657: 1, | L0659: 1, | L0542: 1, | L0666: 1, | H0593: 1,    | H0690: 1, H0682: | H0659: 1, H0670: | H0518: 1, | H0436: 1, H0576: | S0390: 1, S0037: | S3014: 1,    |           | L0753: 1, | H0445: 1, L0596: | H0668: 1, H0667: | S0242: 1, S0194: |
|              |             |              |                    |           |                  |              |           |              |           |            |           |           |           |           |           | •         |           |              |                  |                  | •         |                  |                  |              |           |           |                  |                  |                  |
|              |             |              |                    |           |                  |              |           |              |           |            |           |           |           |           |           |           | •         |              |                  |                  |           |                  |                  |              |           |           |                  |                  |                  |
|              | -           |              |                    |           |                  |              |           |              |           |            |           |           |           |           | _         |           |           |              |                  |                  |           |                  |                  |              | •         |           |                  |                  |                  |
| -            |             |              |                    |           |                  |              |           |              | _         |            |           |           |           |           |           |           |           |              |                  |                  |           |                  |                  |              |           |           | _                |                  | •                |
|              |             |              |                    |           |                  |              | •         |              | _         |            |           |           |           |           |           |           |           |              |                  |                  |           |                  |                  |              |           |           |                  |                  |                  |
|              |             |              |                    |           |                  |              |           |              |           |            |           |           |           |           |           |           |           |              |                  |                  |           |                  |                  | ···          |           |           |                  |                  |                  |
|              |             |              |                    |           |                  |              |           |              |           |            |           |           |           |           |           |           |           |              |                  |                  |           |                  |                  |              | -         |           |                  | •                |                  |

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|------------------------|----------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|------------------|------------------|---------------------|------------------|
|                        |          |                     |                     | •                                      |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     | •                   |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  | ,                   |                  |
|                        |          |                     | •                   |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    | ,                |                  |                     |                  |
|                        |          |                     |                     |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          |                     |                     |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          |                     |                     |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          |                     |                     |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     | •                   |                    |                    |                  |                  |                     |                  |
| pu                     |          | 7,                  | •                   |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
| S0196: 1, H0423: 1 and |          | H0617: 10, S0126: 7 | . 5,                | ₹.                                     | 4;                  | 4,                  | 3,                  | .3                  | .3                  | 3: 3,              | 3,                 | 3,                  | .;<br>3             | #: 2,               | 7:2,                | 5. 2,               | 2,                  |                     | 4,          | ÷.                  | 2,3                 | . 2                 | 2,                  | 7                  | 2,                 | 4: 1,            | 7: 1,            | : 1 <b>,</b>        | : 1,             |
| 3423                   |          | S01                 | S0404: 5, L0747: 5, | 0253                                   | H0545: 4, L0766: 4, | S0328: 4, L0742: 4, | L0752: 4, H0686: 3, | S0420: 3, S0358: 3, | S0046: 3, S0278: 3, | H0592: 3, H0618: 3 | H0100: 3, L0769: 3 | .0665: 3, H0519: 3, | .0743: 3, L0758: 3, | H0341: 2, H0484: 2, | H0333: 2, H0327: 2, | H0544: 2, H0046: 2, | H0594: 2, T0042: 2, | H0494: 2, S0426: 2, | L0761: 2,   | .0764: 2, L0519: 2, | .0532: 2, H0435: 2, | H0651: 2, S0330: 2, | H0539: 2, S0206: 2, | .0751: 2, L0755: 2 | S0106: 2, H0543: 2 | H0422: 2, H0624: | H0171: 1, H0657: | H0656: 1, S0282: 1, | S0029: 1, H0663: |
| I, H(                  | 1.       | : 10,               | ٦,<br>٦             | 5, H                                   | 4,<br>U             | 4, I                | 4, H                | 3, S(               | 3, SC               | 3, H               | 3, L               | 3, H                | 3, L                | 2, H                | 2, H                | 2, H                | 2, T                | 2, S                | 2, L        | 2, L                | 2, H                | 2, S                | 2, S                | 2, L               | 2, H               | 2, H             | 1, H             | 1, S                | 1, H             |
| 96:                    | H0008: 1 | 19(                 | 2.                  | 79:                                    | 345:                | 28:                 | 52:                 | 50.                 | 46:                 | 592:               | <u>ö</u>           | 65:                 | 43:                 | 341:                | 333:                | <del>2</del>        | 34.                 | <del>1</del> 94:    | .0763: 2, 1 | 4.                  | 32:                 | 551:                | 539:                | 51:                | .:90               | 122:             | 171:             | 556:                | 29:              |
| <u>S01</u>             | HOC      |                     | S02                 | <u>S</u>                               | H0,                 | <b>S</b> 03         | <u> 10</u>          | S04                 | 80                  | HOH                | H0                 | <u>1</u>            | <u>6</u>            | <u>H</u>            | )H                  | H0,                 | H0,                 | <u>H</u> 0          | <u>ဌ</u>    | <u>5</u>            | <u> </u>            | <u>H</u>            | )H                  | 5                  | <u>S</u> 01        | ĎH<br>OH         | H0               | <u>Ŭ</u>            | 200              |
|                        |          | ,                   | Lys-108 to Ser-113, | Leu-115 to Leu-124. L0779: 5, H0253: 4 |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          | 9-01                | Ser-                | Leu-                                   |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          | Pro-46 to Pro-60,   | 8 to                | 5 to                                   |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     | ,                   |                     |                    |                    |                  |                  |                     |                  |
|                        |          | 46                  | -108                | 1-11                                   |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          | Pro                 | <u>~</u>            | <u> </u>                               |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          | 2408                |                     |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          | 77                  |                     |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          | 542                 |                     |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          | 144 - 542           |                     |  |                     |                     |                     |                     |                     |                    |                    | ,                   |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  | ·                   |                  |
|                        |          | 17                  |                     | _                                      |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    | •                  |                  |                  |                     |                  |
|                        |          | 233                 |                     |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  | :                   |                  |
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|                        | .        | 255                 |                     |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          | 990255              |                     |  |                     |                     | •                   |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          |                     |                     |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          | V17                 |                     |  |                     |                     |                     |                     |                     |                    |                    | ,                   |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        |          | HLWBV17             |                     |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
|                        | ļ        | H                   |                     |  |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                    |                    |                  |                  |                     |                  |
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| <u> </u>         |                    | ·                |                  |                  |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |           |                  |                  |           |                  |             |                  |                  |
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| 9: 1.            | `:                 | 1: 1,            | ); 1,            | 6: 1,            | 3: 1,            | 9: 1,     | 5: 1,            | 9: 1,            | 6: 1,            | 9: 1,            | 4: 1,            | 0: 1,            | . 1,<br>1,       | 8: 1,            | 4: 1,            | 3: 1,            | 4: 1,            | 11: 1,           | 6: 1,              | 4: 1,            | 7: 1,              | l: 1,     | 9: 1,            | 4: 1,            | 8: 1,     | 0: 1,            | 3: 1,       | 3: 1,            | 4: 1,            |
| . H045           | S0354              | , H035           | , \$0220         | , H058           | , L062           | l, H0069: | , H057           | , H030           | , H054           | , H000           | , H002           | , H051           | , H028           | , H068           | , L019           | , H021           | , H064           | , H018           | , S003             | , ноез           | , H008             | , T0041:  | , H050           | , S014           | l, H0538: | , L052           | , L0643:    | ,1.077           | , L079           |
| H0662: 1, H0459: | S0418: 1, S0354: 1 | H0393: 1, H0351: | S6016: 1, S0220: | 10370: 1, H0586: | H0497: 1, L0623: | [0114: 1  | .0021: 1, H0575: | H0052: 1, H0309: | H0231: 1, H0546: | H0041: 1, H0009: | H0050: 1, H0024: | .0163: 1, H0510: | H0266: 1, H0284: | H0286: 1, H0688: | H0428: 1, L0194: | T0006: 1, H0213: | H0553: 1, H0644: | H0628: 1, H0181: | H0598: 1, S0036: 1 | H0040: 1, H0634: | H0616: 1, H0087: 1 | H0059: 1, | H0561: 1, H0509: | H0647: 1, S0144: | S0142: 1  | S0002: 1, L0520: | .0772: 1, ] | .0771: 1, L0773: | .0662: 1, L0794: |
| H                | 80                 | <u>E</u>         | 8                | H                | Ħ                | <u>은</u>  | <u>ន</u>         | Ħ                | Ħ                | 田                | Ħ                | <u>김</u>         | H                | Ħ                | Ħ                | <u>E</u>         | 畄                | Ħ                | Ħ                  | Ħ                | 芦                  | 王         | Ħ                | Ħ                | <u>8</u>  | <u>8</u>         | <u> </u>    | 3                | 7                |
|                  |                    |                  | ÷                |                  |                  | •         |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |           |                  |                  |           |                  |             |                  |                  |
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| Ŀ                |                    |                  |                  |                  |                  | ,         |                  |                  |                  |                  |                  | <u></u>          |                  |                  |                  |                  |                  |                  |                    | <u> </u>         |                    |           |                  |                  |           |                  |             |                  |                  |
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| أحراج | L0542: 1, L0545: 1,<br>L0666: 1, L0664: 1,<br>H0593: 1, H0689: 1,<br>H0690: 1, H0682: 1,<br>H0659: 1, H0670: 1, | H0518: 1, S0146: 1,<br>H0436: 1, H0576: 1,<br>S0390: 1, S0037: 1,<br>S3014: 1, L0748: 1, | .0754: 1, L0749: 1,<br>.0753: 1, S0031: 1,<br>10445: 1, L0596: 1. | H0668: 1, H0667: 1,<br>S0242: 1, S0194: 1, | S0196: 1, H0423: 1 and H00008: 1. | S0126: 23, S0212: 16, S0250: 15, S0192: 14, | H0622: 12, H0620: 9,<br>H0144: 9, S0040: 7 | H0024: 7, H0039: 7,<br>S3014: 7, S0011: 7, | H0013: 6, L0565: 6, | S0028: 6, H066/: 6,<br>S0194: 6, H0619: 5,<br>H0031: 5, H0628: 5. |
|       | <u> </u>  | <u> </u>   | <u></u>   | <u> </u>                                   | S II                              | Leu-1 to Gly-8.                             | <u>i-i-i</u>                               | iπo  | <u>. ;;; (</u>      |   |
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| 4,                  | ÷                   | 4٠                  | χ,                  | ω,                  | ະ້                  | 3,                  | <b>~</b> ~ | ~ຳ                  | رن<br>در            | ર્ય                 | ć,                  | ر<br>ا              | ر                   | ~5                  | ີ້                  | <u>_</u>           | 1,               |                    | T,               | H,         | <del>, ,</del>   | 1,                 | T,       | · .              |                  | 1,               | 1,               | Ħ,                  | Į,               |
| 42                  | 27:7                | 22: 7               | 39:                 | 14:                 | 4.5                 | 16:                 | ∞.         | 36:                 | 27:                 | 50:                 | <b>4</b> %          | 28:                 | 91:                 | 96:2                | 52: 2               | 22:                | 51:              | <del>.</del>       | 55:              | 49.        | 85:              | 99.                | 4.       | 22               | 33:              | 53:              | 24.              |                     | <del>4</del>     |
| H0551: 5, H0624: 4, | H0012: 4, S0027: 4, | .0747: 4, H0665: 4, | H0586: 3, T0039: 3, | H0575: 3, H0014: 3, | H0252: 3, L0142: 3, | H0038: 3, H0616: 3, | 20         | S0298: 2, H0486: 2, | H0244: 2, H0427: 2, | H0318: 2, H0050: 2, | .0471: 2, H0284: 2, | H0286: 2, H0328: 2, | H0032: 2, H0591: 2, | 50390: 2, S0206: 2, | S0196: 2, S0462: 2, | H0170: 1, H0222: 1 | <b>106</b>       | S0356: 1, S0354: 1 | 30360: 1, H0645: | H05        | H0370: 1, H0485: | H0270: 1, H0599: 1 | H05      | S0003: 1, S0022: | S0214: 1, L0053: | H0030: 1, H0553: | H0644: 1, H0124: | S0366: 1, H0598: 1, | H0090: 1, H0040: |
| 5,                  | 4,                  | <b>4</b> , I        | ω,                  | ω,                  | 3,                  | 3,                  | 3, I       | 2, I                | 2,                  | 4                   | 2,1                 | 2                   | . <u>~</u>          | 2,                  | . 2,                |                    | <u></u>          | 1,5                | 1, I             | <u>_</u> ; | Ξ,               | <u>_</u>           | -        | 1,5              | 1,1              | <u>—</u>         | <del>-</del>     | 1,1                 | <del>-</del> i   |
| 551                 | 012                 | 747:                | 586                 | 575                 | 252                 | 038                 | 337:       | 298:                | 44                  | 318                 | 471:                | 286                 | 032                 | 390:                | 196:                | 170                | <del>1</del> 30: | 356:               | 360              | 393        | 370              | 270                | 042      | 303:             | 214:             | 030              | 4                | 366:                | 8                |
| 呂                   | <u>Ħ</u>            | <u>ප</u>            | 丑                   | E<br>E              | Ë                   | 丑                   | <u>8</u>   | 80                  | H                   | H                   | <u> </u>            | 유                   | 유                   | <u>S</u> 0          | <u>S</u> 0          | 유                  | <u>8</u>         | <u>S</u>           | <u>S</u>         | 9          | E<br>E           | 丑                  | <u>H</u> | S                | <u>20</u>        | 유                | 丑                | <u>S</u>            | 田                |
|                     | ٠.                  |                     |                     |                     |                     |                     |            |                     | •                   |                     |                     |                     |                     |                     |                     |                    |                  | ,                  |                  |            |                  |                    |          |                  |                  |                  |                  |                     |                  |
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|                     |  |                     | •                   |                     |                     |                     |                     |                        | ,         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |  |                     |                     | -                   |                     |                     |                     |                        |           |                     |                     |                     |                     |                     | . <u> </u>          |                     | •                   |                     |                     |                     | <del></del>         | <u> </u>            |                     |                     |                     |                     |                     | _                   |
|                     |  |                     |                     |                     |                     |                     |                     |                        |           | 17                  |                     |                     | •                   |                     | •                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0063: 1, H0647: 1, | L0763: 1, L0545: 1,<br>1 0789: 1 1 0438: 1 | H0519: 1, H0682: 1, | H0658: 1, H0660: 1, | S0332: 1, S0146: 1, | S0032: 1, L0439: 1, | L0751: 1, L0754: 1, | L0750: 1, L0731: 1, | S0242: 1, H0008: 1 and | H0293: 1. | S0126: 8, S0418: 5, | L0439: 5, H0551: 4, | L0438: 4, L0747: 4, | S0192: 4, H0556: 3, | H0046: 3, L0769: 3, | L0771: 3, L0662: 3, | L0665: 3, L0731: 3, | H0265: 2, S0360: 2, | S0410: 2, S0046: 2, | H0370: 2, H0618: 2, | H0284: 2, H0181: 2, | H0494: 2, H0560: 2, | L0763: 2, L0764: 2, | L0649: 2, L0378: 2, | L0806: 2, L0547: 2, | L0789: 2, L0666: 2, | L0663: 2, H0520: 2, | H0435: 2, S0152: 2, | L0759: 2, L0596: 2, |
|                     |  |                     |                     |                     |                     |                     |                     | •                      |           | Thr-77 to Val-84,   | Ser-244 to Val-255, | Ala-296 to Val-301. | •                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     |                     |                     |                     |                     |                        |           | 2410                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     |                     |                     |                     | -                   |                        | -         | 1887 - 859          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     |                     |                     |                     |                     |                        |           | 235                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     |                     | ٠.                  |                     |                     |                        |           | 990546              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     |                     |                     |                     |                     |                        |           | HOGDC67             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | - uv-               |                     |                     | •                   |                     |

|                    | •                |        |           |        |           | · · ·     |           |           |           |             |           |             |           |           |           |           |           |           |           |           |                  |                |           |           |           |          | •         |           |           |
|--------------------|------------------|--------|-----------|--------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|----------------|-----------|-----------|-----------|----------|-----------|-----------|-----------|
|                    |                  |        |           |        |           |           |           |           |           |             |           |             |           |           |           |           |           |           |           |           |                  |                |           |           |           |          |           |           |           |
|                    |                  |        |           |        |           |           |           |           |           |             |           |             |           |           |           |           |           |           |           |           | •                |                |           |           |           |          |           |           |           |
|                    |                  |        |           |        |           |           |           |           |           |             |           |             |           |           |           |           |           |           |           |           |                  | <u>-</u>       |           |           |           |          |           |           | _         |
| 4: 1,              | 2: 1,            | 2: 1,  | 5: 1,     | 7: 1,  | 9: 1,     | 9: 1,     | 9: 1,     | 3: 1,     | 4: 1,     | 0: 1,       | 66: 1,    | 6: 1,       | 5: 1,     | ks: 1,    | [7: 1,    | 5: 1,     | 7, 1,     | 25: 1,    | 5: 1,     | 0: 1,     | 38: 1,           | 9: 1,          | 7: 1,     | 4: 1,     | 3: 1,     | 6: 1,    | 3: 1,     | 0: 1,     | 9: 1,     |
| .0595: 2, H0624: 1 | 1, S034,         | ٣í     | 1, S0045: | Ę      | 1, H0559: | 1, T0109: | 1, H0309: | 1, H0123: | 1, H0024: | 1, T0010: 1 | 1, H0266: | 1, H0286:   | 1, H0615: | 1, H0048: | 1, H0617: | 1, H0135: | 1, H0164: | 1, H0625: | 1, L0065: | 1, S0150: | H0633: 1, H0538: | 1, H0529:      | 1, L0637: | 1, L0374: | 1, L0363: |          | 1, L0533: | 1, L0650: | 1, L0809: |
| 1.0595:            | S0040: 1, S0342: | H0657: | S0420:    | H0441: | H0333:    | H0486:    | H0253:    | H0545:    | H0081:    | S0388:      | H0594:    | H0292:      | H0252:    | H0039:    | H0644: 1  | H0598:    | H0063: 1, | H0433: 1, | H0561: 1, | H0131: 1  | H0633:           | S0208:         | 10770     | L0800: 1  | L0644:    | L0794: 1 | L0388:    | L0804: 1, | L0540:    |
|                    |                  |        |           |        |           |           |           |           |           |             |           |             |           |           |           |           |           |           |           |           |                  |                |           |           |           |          |           |           |           |
|                    |                  | ,      |           |        |           |           |           |           |           |             |           | ٠           |           |           |           |           |           |           |           |           |                  |                |           |           |           |          |           |           |           |
|                    |                  |        |           |        |           |           |           |           |           |             |           |             |           |           |           |           |           |           |           |           |                  |                | •.        |           |           |          |           | ,         |           |
| ·                  |                  |        |           |        |           |           |           |           |           |             |           |             |           |           |           |           |           |           |           |           |                  |                |           |           |           |          |           |           |           |
|                    |                  |        |           |        |           |           |           |           |           |             |           |             |           |           |           |           |           |           |           |           |                  |                |           |           |           |          |           | •         |           |
|                    |                  | •      |           |        |           | •         |           |           | -         |             |           | <del></del> |           |           |           |           |           |           |           |           |                  |                |           |           |           |          | -         |           | _         |
|                    |                  |        |           | _      |           |           |           |           |           |             |           |             |           |           |           |           |           |           |           |           |                  |                |           |           |           | •        |           | •         |           |
|                    |                  |        |           |        |           |           |           |           | ,         |             |           |             |           |           |           |           |           |           |           |           |                  |                |           |           |           |          |           |           |           |
|                    |                  |        |           |        |           |           |           |           |           |             |           |             |           |           |           |           |           |           |           | _         |                  | <b>, , ,</b> . |           |           |           |          |           | ·         |           |
|                    |                  |        |           |        |           | ٠         |           |           |           |             |           |             |           |           |           |           |           |           |           |           |                  |                |           |           |           | ,        |           |           |           |
|                    |                  |        |           |        | _         |           |           |           |           |             |           |             |           |           |           |           |           |           |           |           |                  |                |           |           |           |          |           |           |           |

|  | 123829,               | 14/5/0,<br>181430,                         | 252940,             | 264700,             | 600808,             | 601284,             | 601769,             | 601769,             | 602116              | <u>.</u>            |                     |                     | ,                   |                     |   |                     |                     |                     |                     |                        |                     |                     |
|--|-----------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|
|  | 12q14                 |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |   |                     | _                   |                     |                     |                        |                     |                     |
| H0547: 1, H0593: 1,<br>H0659: 1, H0660: 1,<br>S0044: 1, H0478: 1,<br>S3014: 1, S0032: 1,<br>L0750: 1, L0777: 1,<br>L0758: 1, S0031: 1,<br>H0653: 1 and H0667: 1. | L0794: 15, L0766: 12, | L0439: 9, H054/: 7,<br>H0520: 6, H0435: 5, | S0440: 4, S0422: 4, | .0664: 4, L0756: 4, | S0376: 3, H0251: 3, | H0529: 3, L0659: 3, | .0755: 3, S0026: 3, | H0657: 2, S0418: 2, | S0444: 2, L0646: 2, | .0768: 2, L0789: 2, | H0519: 2, H0672: 2, | H0555: 2, L0754: 2, | .0747: 2, L0779: 2, | .0777: 2, L0731: 2, | .0759: 2, L0589: 2,                           | .0581: 2, L0608: 2, | .0593: 2, H0542: 2, | H0423: 2, H0422: 2, | 70002: 1, S0040: 1, | H0717: 1, H0650: 1,    | H0662: 1, S0420: 1, | H0580: 1, H0729: 1, |
| TT S S I H H   | <b>b</b>              | <u></u>                                    | <u> </u>            | <u> </u>            | <u> </u>            | <u> </u>            | I                   | <u>, 144</u>        | <u> </u>            |                     |                     |                     |                     | <u> </u>            | <u>, , , , , , , , , , , , , , , , , , , </u> | <u> </u>            | <del></del>         | -                   |                     | <u>, <del></del> -</u> |                     | <u>. 144.</u>       |
|  | 2411                  |  |                     |                     |                     |                     |                     | _                   | <u>-</u>            |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                        |                     |                     |
|  | 4088 - 831            |  |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                        |                     |                     |
|  | 236                   |  |                     |                     |                     | •                   |                     |                     |                     |                     |                     | ,                   |                     |                     |   |                     |                     |                     |                     |                        |                     |                     |
|  | 609066                |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                        |                     |                     |
|  | HCDB002               |  |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |   |                     |                     |                     |                     |                        |                     | ٠,                  |

|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |   |                        | ;                   |    |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|------------------------|---------------------|----|
|                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                        | . •                 |    |
| -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   | •                      | !                   |    |
| H0229: 1, L0717: 1, | H0497: 1, H0486: 1, | H0244: 1, H0318: 1, | H0581: 1, H0596: 1, | L0041: 1, H0009: 1, | H0563: 1, H0572: 1, | L0471: 1, H0266: 1, | S0214: 1, H0252: 1, | H0039: 1, L0055: 1, | S0036: 1, H0090: 1, | H0412: 1, H0623: 1, | H0059: 1, S0038: 1, | H0494: 1, S0150: 1, | L0637: 1, L0641: 1, | L0764: 1, L0771: 1, | L0803: 1, L0804: 1, | L0775: 1, L0375: 1, | L0657: 1, L0518: 1, | L0809: 1, L5623: 1, | L0666: 1, H0144: 1, | H0701: 1, H0711: 1, | H0659: 1, H0670: 1, | H0660: 1, H0648: 1, | L0602: 1, S0028: 1, | L0744: 1, L0748: 1, | L0780: 1, S0436: 1, | • | L0366: 1 and H0665: 1. | H0615: 1 and H0660: | 1. |
|                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                        |                     |    |
|                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |   |                        | 2412                |    |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                        | 101 - 505           |    |
|                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                        | 237                 |    |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |   |                        | 990611              |    |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                        | HODGN92             |    |

|                      |                     |                     |                     |                     | ,                   |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                        |           |                     |    |                  |         |
|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|----|------------------|---------|
|                      |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |    | 170995,          | 601414, |
|                      |                     |                     |                     |                     |                     |                       |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |    | 1p22.1-<br>n21.3 |         |
| H0618: 12, H0253: 4, | L0771: 4, S0358: 2, | H0688: 2, H0658: 2, | H0651: 2, L0439: 2, |                     |                     | \$0420: 1, \$0376: 1, | H0619: 1, H0609: 1, | H0586: 1, H0642: 1, | H0427: 1, H0196: 1, | H0309: 1, H0546: 1, | H0009: 1, H0123: 1, | H0292: 1, H0553: 1, | H0617: 1, H0551: 1, | H0264: 1, S0440: 1, | H0646: 1, L0372: 1, | L0646: 1, L0803: 1, | L0658: 1, L0659: 1, | L0783: 1, L0788: 1, | L0438: 1, H0690: 1, | H0660: 1, H0648: 1, | H0479: 1, L0744: 1, | L0779: 1, L0758: 1, | S0436: 1, H0542: 1 and | H0423: 1. | H0438: 1 and L0749: | 1. |                  |         |
| Gln-1 to Pro-11,     | Val-15 to Arg-23,   | Arg-44 to Arg-59,   | Thr-70 to Gln-75,   | Ala-153 to Gln-168, | Pro-187 to Pro-194, | Pro-204 to Asp-214.   | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |    |                  |         |
| 2413                 |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2414                |    | 2415             |         |
| 1166 -               | 2098                |                     |                     |                     |                     | •                     |                     |                     | ,                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 95 - 145            |    | 184 - 324        |         |
| 238                  |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 239                 |    | 240              |         |
| 990751               |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 692066              |    | 990913           |         |
| HPDRP30              |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | •         | HBXFN09             |    | HDTB075          |         |

| 602094 |                  |   |                |  |           | 125270,             | 125270,                           | 137350, | 191100, | 215700, | 223360,<br>268900, | 601850 |                     |                   |                   |                   | ,                   |                     |                     |                     |                     |                     |                     |
|--------|------------------|---|----------------|--|-----------|---------------------|-----------------------------------|---------|---------|---------|--------------------|--------|---------------------|-------------------|-------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|        |                  |   |                |  |           | 9q34                |                                   |         |         |         |                    |        | 2q                  |                   |                   |                   |                     |                     |                     |                     |                     |                     |                     |
|        | S0045: 1         | AR055: 1, AR096: 1,<br>AR089: 1, AR060: 1,<br>AR104: 1, AR039: 1, |                | AR033: 0, AR052: 0<br>S0418: 1, H0328: 1 and | L0758: 1. | 0435: 1             | and L0592: 1.                     |         |         |         |                    |        | H0553: 1 and L0758: |                   |                   |                   | L0748: 3, L0759: 3, | H0366: 2, L0666: 2, | L0665: 2, L0602: 2, | S0136: 2, L0751: 2, | L0779: 2, S0442: 1, | L0717: 1, L0738: 1, | T0010: 1, S0003: 1, |
|        | Arg-1 to Asn-18. |   | 11.            |  |           | Phe-102 to Pro-111, | His-136 to Lys-141. and L0592: 1. | ·       |         |         |                    |        | Arg-1 to Ser-6,     | Glu-31 to Arg-40, | Ser-48 to Asn-56, | Asp-69 to Val-75. | Asn-47 to Phe-58.   |                     |                     |                     |                     |                     |                     |
|        | 2416             | 2417  |                |  |           | 2418                |                                   |         |         |         | •                  |        | 2419                |                   |                   |                   | 2420                |                     |                     |                     |                     |                     |                     |
|        | 3 - 902          | 828 - 1592  | <del>. •</del> |  |           | 1 - 543             |                                   |         |         |         |                    |        | 156 - 449           |                   |                   |                   | 296 - 502           |                     |                     |                     |                     |                     |                     |
|        | 241              | 242   |                |  |           | 243                 |                                   |         |         |         |                    |        | 244                 |                   |                   |                   | 245                 |                     |                     |                     |                     |                     |                     |
|        | 991014           | 991048  |                |  |           | 991268              |                                   |         | _       |         | _                  |        | 991516              |                   |                   |                   | 991654              |                     |                     |                     |                     |                     |                     |
|        | HELGN26          | HODCU15   |                | · .  |           | HOGDI51             |                                   |         |         |         |                    |        | HLWAF02             |                   |                   |                   | HRKPA16             |                     |                     |                     | <del></del>         |                     | ,                   |

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|---|--|
|   | 107250,<br>134820,<br>134820,<br>134830,<br>134850,<br>134850,<br>181600,<br>189800,<br>266300   |
|   | 4q28-q31   |
| H0622: 1, H0673: 1,<br>H0674: 1, H0388: 1,<br>H0412: 1, T0041: 1,<br>S0422: 1, S0426: 1,<br>L0638: 1, L0662: 1,<br>L0768: 1, L0766: 1,<br>L0775: 1, L0805: 1,<br>L0655: 1, L0657: 1,<br>L0655: 1, L0659: 1,<br>H0670: 1, S0406: 1,<br>H0678: 1, L0745: 1,<br>L0756: 1, L0752: 1,<br>S0436: 1, L0752: 1, | L0747: 11, L0770: 6,<br>S0404: 6, L0752: 6,<br>L0748: 5, L0776: 4,<br>L0755: 4, L0731: 4,<br>L0759: 4, S0442: 3,<br>H0722: 3, S0438: 3,<br>L0775: 3, L0375: 3,<br>L0779: 3, T0049: 2,<br>S0358: 2, H0730: 2,<br>H0586: 2, T0048: 2,<br>L0766: 2, H0690: 2,<br>H0658: 2, L0750: 2,<br>S0412: 2, H0713: 1,<br>H0662: 1, S0354: 1,<br>S0376: 1, S0360: 1, |
|   | Asp-15 to Ser-25,<br>Ser-33 to Val-38,<br>Lys-181 to Phe-187.  |
|   | 2421   |
|   | 059 - 06   |
|   | 246  |
|   | 991761   |
|   | НРДQХ94  |

| ·  |   | <del></del> _   |
|--|---|---|
|  | 109543,<br>600631,<br>601499                  |   |
|  | 13q14   |   |
| S0410: 1, H0741: 1,<br>H0645: 1, H0438: 1,<br>H0647: 1, H0643: 1,<br>H06572: 1, L0622: 1,<br>H0075: 1, H0031: 1,<br>H0014: 1, H0373: 1,<br>S0366: 1, H0063: 1,<br>S0366: 1, L0772: 1,<br>L0764: 1, L0526: 1,<br>L0764: 1, L0526: 1,<br>S0148: 1, H0593: 1,<br>S0126: 1, H0666: 1,<br>S0126: 1, H0666: 1,<br>S0206: 1, L0740: 1,<br>L0749: 1, L0753: 1,<br>L0749: 1, L0753: 1,<br>L0758: 1, H0445: 1, | S0026: 1 and H0721: 1.<br>H0369: 1 and H0529: | H0038: 6, L0663: 4,<br>L0601: 4, S0442: 3,<br>L0157: 3, L0770: 3,<br>L0665: 3, S0436: 3,<br>H0341: 2, H0125: 2,<br>H0360: 2, H0318: 2,<br>H0328: 2, H0615: 2, |
| <u> </u>   |   |   |
|  | 2422  | 2423  |
|  | 40 - 390                                      | 115 - 1371  |
|  | 247   | 248   |
|  | 992678  | 992780  |
|  | HEAAY09                                       | HPDRH78   |

| $\vdash$            |                     |                     |                     |      |                     |                    | -                   |                    |                  |                  |                  |                  |                  | •                |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|---------------------|---------------------|---------------------|---------------------|------|---------------------|--------------------|---------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|------------------|------------------|--------------------|----------|------------------|------------|------------------|------------------|
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  | •                |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
| 2,                  | o.î                 | ດ໌                  | حرر                 | ۷,   | ٠ſ                  | ດໂ                 | 1,                  | Ľ,                 | <b></b>          | 1,               | <u>, _</u> _     |                  |                  | Ι,               | <b></b>          | 1,               | 1,               | 1,               | T                | 1,               | 7,                 | Ι,               | T,               | 1,                 | ·        |                  |            | <u>,</u>         |                  |
| F0023: 2, H0561: 2, | S0440: 2, L0766: 2, | ,0809: 2, H0547: 2, | H0519: 2, S0126: 2, | :75: | S0330: 2, L0754: 2, | J0745: 2, L0750: 2 | H0506: 2, H0265: 1, | H0556: 1, S0040: 1 | :96              | 557:             | 69               | 05: 1            | 19.              | 22:              | 31:              | 18:              | 70:              | 71:              | 31:              | .0055: 1, H0166: | H0169: 1, H0068: 1 | 63:              | 50:              | H0647: 1, H0646: 1 | 38: 1    | 41:              | .0662:     | 75:              | .92              |
| H05                 | Ž                   | H05                 | <b>S01</b>          | H0H  | 107                 | 107                | H02                 | S00                | H02              | H06              | 90H              | 100              | H06              | <b>S02</b>       | H04              | 90H              | HOS              | 7                | HOC              | H01              | HOO                | H01              | <b>S</b> 04      | H06                | 106      | 106              | F06        | 1007             | 1.07             |
| 2,                  | 2                   | 2,                  | ;<br>2,             | . 2, | 4                   | .;<br>2,           | 5. 2,               | ž. 1,              | 7: 1,            | 3: 1,            | <u></u>          | Ι,               | ÷                | l: 1,            | . T              | . 1;             | 1,               | 3: 1,            | ?: 1,            | : 1 <b>,</b>     | <b>&gt;</b> : 1,   |                  | <b>?</b> : 1,    | 7: 1,              | <u>.</u> | . I,             | . T        | 1, 1,            | : 1,             |
| 3023                | <del>4</del>        | 808                 | 0519                | 0659 | 3330                | 3745               | 0506                | 0556               | H0717: 1, H0294: | H0583: 1, H0657: | .0785: 1, H0669: | S0420: 1, L0005: | S0376: 1, H0619: | H0351: 1, S0222: | S0220: 1, H0431: | F0039: 1, H0618: | Γ0110: 1, H0570: | H0569: 1, L0471: | H0292: 1, H0031: | 2055             | 0169               | S0036: 1, H0163: | H0359: 1, S0450: | 7490               | 34       | L0372: 1, L0641: | 0643: 1, 1 | .0768: 1, L0775: | .0653: 1, L0776: |
| E                   | <u>x</u>            | <u> </u>            | 王                   | Ξ    | <u> </u>            | 7                  | 王                   | 王                  | H                | H                | ュ                | <u>8</u>         | <u> </u>         | Ξ                | <u> </u>         | Ĕ                | Ē                | 耳                | 耳                | ĭ                | Ħ                  | <u> </u>         | H                | 耳                  | Š        | ĭ                | <u> </u>   |                  | <u> </u>         |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  | •                |                  |                  | •                |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      | •                   |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  | •                |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
| _                   |                     |                     |                     |      | <u> </u>            |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          | ,                |            |                  |                  |
| $\vdash$            |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  | _                |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    | •                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
| $\vdash$            | -                   |                     |                     |      |                     |                    | -                   |                    |                  |                  |                  |                  |                  |                  |                  | •                |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    | 2                |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      | `                   |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     | •                   |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     | _                   |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  | •                |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  | •                |                  |                  |                    |                  |                  |                    |          |                  |            |                  |                  |
|                     |                     |                     |                     |      |                     |                    |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | _                |                  |                    |                  |                  |                    | -        |                  |            |                  | _                |

| L0512: 1, L0783: 1,<br>L0382: 1, L0532: 1,<br>L0666: 1, S0374: 1,<br>L0438: 1, H0520: 1,<br>H0593: 1, H0690: 1,<br>H0682: 1, H0658: 1,<br>S0380: 1, S0044: 1,<br>S0146: 1, S0044: 1,<br>S0146: 1, S0047: 1,<br>L0777: 1, L0731: 1,<br>S0031: 1, S0434: 1,<br>L0599: 1, H0668: 1,<br>H0665: 1, S0424: 1,<br>UNKWN: 1 and L0600: | AR055: 28, AR039: 26, AR060: 21, AR033: 20, AR052: 17, AR089: 16, AR104: 11, AR053: 15, AR061: 11  L0751: 6, L0783: 4, H0672: 4, L0805: 2, L0758: 2, L0758: 2, H0657: 1, H0255: 1, H0638: 1, S0442: 1, H0256: 1, H0587: 1, H0256: 1, H0587: 1, H0256: 1, |
|--|--|
|  | Gln-2 to Ala-8,<br>Asn-18 to Pro-28,<br>Ala-129 to Asp-135,<br>Ser-161 to Ser-171,<br>Val-242 to Arg-250.  |
|  | 2424   |
|  | 19 - 774   |
|  | 249  |
|  | 992900   |
|  | HLMHG68  |

|  |   |          |  |  |     |                   |                   |  | -                   |                     |                     |   |                     |                     |                     |  |
|--|---|----------|--|--|-----|-------------------|-------------------|--|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|--|
| L0623: 1, H0014: 1,<br>H0051: 1, S0388: 1,<br>H0688: 1, H0428: 1,<br>H0424: 1, H0213: 1, | H0401: 1, H0111: 1,<br>H0617: 1, H0163: 1,<br>H0063: 1, H0551: 1, | <u>-</u> | L0774: 1, L0523: 1,<br>L0378: 1, L0655: 1, | L4501: 1, H0690: 1,<br>H0659: 1. H0658: 1. | _   | 1 and 10001 1.    |                   |  | L0518: 4, S0356: 3, | H0617: 3, L0777: 3, | H0486: 2, H0544: 2, | H0547: 2, H0660: 2,                     | L0757: 2, L0604: 2, | H0423: 2, H0656: 1, | H0341: 1, H0484: 1, | H0483: 1, H0661: 1,<br>S0360: 1, S0045: 1, |
|  |   |          |  |  |     | Trp-31 to Thr-39, | Asn-71 to Gln-76, | Pro-134 to Thr-150,<br>Lys-238 to Lys-243. | Arg-1 to Glu-6,     | Arg-52 to Ala-58,   | Phe-72 to Leu-79,   | Giy-88 to Giu-93,<br>Tvr-124 to Arg-134 |                     |                     |                     |  |
|  |   |          |  |  |     | 2425              |                   |  | 2426                |                     |                     |   |                     |                     |                     |  |
|  |   |          |  |  | ••• | 2 - 811           |                   |  | 139 - 540           |                     |                     |   |                     |                     |                     |  |
|  |   |          |  |  |     | 250               |                   |  | 251                 |                     |                     |   |                     |                     |                     |  |
|  |   |          |  |  |     | 992973            |                   |  | 993380              |                     |                     |   |                     |                     |                     |  |
|  |   |          |  |  |     | HODFO57           |                   | ····-                                      | HOCPZ44             | **                  |                     |   |                     |                     | ,                   |  |

|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                   |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| S0132: 1, S0300: 1, | H0411: 1, H0438: 1, | H0586: 1, H0574: 1, | F0109: 1, H0156: 1, | H0318: 1, H0251: 1, | H0014: 1, T0079: 1, | H0615: 1, T0023: 1, | H0674: 1, S0036: 1, | H0038: 1, H0040: 1, | H0616: 1, T0067: 1, | T0042: 1, L0475: 1, | S0422: 1, H0529: 1, | H0520: 1, H0682: 1, | L0740: 1, L0749: 1, | L0758: 1, L0759: 1, | L0588: 1, L0362: 1, | S0276: 1, S0196: 1, | H0543: 1 and H0506: 1. | L0439: 8, L0774: 4, | L0731: 4, H0622: 3, | H0617: 3, S0002: 3, | L0662: 3, L0438: 3, | L0777: 3, S0134: 2, | L0717: 2, H0370: 2, | H0052: 2, H0596: 2, | L0163: 2, H0163: 2, | L0769: 2, L0768: 2, | L0766: 2, L0666: 2, | H0682: 2, L0740: 2, | L0752: 2, L0757: 2, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Gly-23 to Lys-28,   | Ser-37 to Gly-42,   | Lys-90 to Asp-101,  | Glu-175 to Phe-182, | Glu-245 to Thr-251. |                     |                     |                     |                     |                     |                     |                     |
|                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | •                   |                     |                     |                     |                        | 2427                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | į                   |
|                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                        | 69 - 821            |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 252                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 993403              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                        | HPAMU38             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | •                 |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-------------------|---------------------|
|                     |                     | ***                 |                     |                     | -                   | <u>.</u>            | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                        |                   |                     |
| L0759: 2, L0605: 2, | S0040: 1, H0583: 1, | S0001: 1, S0282: 1, | H0255: 1, H0669: 1, | H0662: 1, S0354: 1, | S0278: 1, S6022: 1, | H0549: 1, S6014: 1, | H0438: 1, H0427: 1, | H0618: 1, S0010: 1, | S0049: 1, H0150: 1, | H0009: 1, H0050: 1, | H0012: 1, H0620: 1, | H0057: 1, S0388: 1, | H0252: 1, T0067: 1, | H0488: 1, H0646: 1, | S0142: 1, L0770: 1, | L0761: 1, L0648: 1, | L0649: 1, L0803: 1, | L0375: 1, L0776: 1, | L0659: 1, L0783: 1, | L0665: 1, H0144: 1, | H0519: 1, H0593: 1, | H0690: 1, H0518: 1, | L0611: 1, S3012: 1, | L0754: 1, L0747: 1, | H0653: 1, H0665: 1, | S0276: 1 and H0422: 1. | 8, AR033:         | AR089: 6, AR060: 6, |
|                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Trp-26 to Lys-36. |                     |
|                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     | •                   |                     |                     |                     |                     |                     |                        | 2428              |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 265 - 372         |                     |
|                     |                     |                     |                     | <u> </u>            |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 253               |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 993602            |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | HNGGK47           |                     |

|           |        |           |                     |                  |                  |                  | •                      |          |                   |                   |                   |                   |                        |                   |                  |                    |                     |                     |                   |                     |                     |                  |                  |                  |                     |                     |                     |                    |                  |
|-----------|--------|-----------|---------------------|------------------|------------------|------------------|------------------------|----------|-------------------|-------------------|-------------------|-------------------|------------------------|-------------------|------------------|--------------------|---------------------|---------------------|-------------------|---------------------|---------------------|------------------|------------------|------------------|---------------------|---------------------|---------------------|--------------------|------------------|
|           |        |           |                     |                  |                  |                  |                        |          |                   |                   |                   |                   |                        |                   |                  |                    |                     |                     |                   |                     |                     | ,                |                  |                  |                     |                     |                     |                    |                  |
| _         |        |           |                     |                  |                  |                  |                        |          |                   |                   |                   |                   |                        |                   |                  |                    |                     |                     |                   |                     | •                   |                  |                  |                  |                     |                     | •                   |                    | _                |
|           |        |           |                     |                  |                  |                  |                        |          |                   |                   |                   | ,                 |                        |                   |                  |                    |                     |                     |                   |                     |                     |                  |                  |                  |                     |                     |                     |                    |                  |
| 5,        | 4,     | 4         |                     |                  |                  |                  | nd h                   |          |                   |                   |                   |                   | and                    |                   |                  | _                  |                     |                     |                   |                     |                     | ,                | _                |                  | •                   |                     |                     |                    |                  |
| 5, AR039: | K061:  | 4, AR052: | L0522: 3, L0748: 2, | 586: 1,          | 515: 1,          | 794: 1,          | S0052: 1, S0374: 1 and |          |                   |                   |                   |                   | S0001: 1, H0328: 1 and |                   |                  | L0809: 7, L0758: 7 | 07: 4,              | 794: 4,             | 333: 3,           | 761:3,              | 303: 3,             | 395: 2,          | 339: 2,          | 36: 2,           | 566: 2,             | H0658: 2, L0751: 2, | 759: 2,             | 185: 2,            | 716: 1,          |
|           | : 4, A | : 4,A     | 2; 3, LC            | 1, HO            | .0034: 1, H0615: | .0764: 1, L0794: | 1, S03                 |          | 5:3               |                   |                   |                   | : 1, H(                | 1.                |                  | 9: 7, LC           | .0754: 5, S0007: 4, | .0662: 4, L0794: 4, | 0665: 4, H0333:   | .0769: 3, L0761:    | L0768: 3, L0803:    | .0439: 3, H0395: | S0222: 2, H0039: | H0124: 2, S0036: | .0535: 2, L0666: 2, | : 2, LO             | .0747: 2, L0759: 2, | .0591: 2, L0485: 2 | H0624: 1, H0716: |
| AR104:    | AR096: | AR053:    | L0522               | H0171: 1, H0686: | L0034:           | L0764:           | S0052:                 | L0601: 1 | H0615: 3          |                   | ,                 |                   | S0001                  | H0615: 1          |                  | F080               | L0754:              | L0662:              | L0665:            | L0769:              | T0768:              | L0439:           | S0222:           | H0124            | L0535:              | H0658               | L0747               | L0591:             | H0624            |
|           |        |           |                     |                  |                  |                  |                        |          | 18,               | -25,              | 43,               | 4.                | ,                      | 4,                | -91.             | 7,                 | -24,                | -32,                | ,88,              | s-129,              | u-190.              |                  |                  |                  |                     |                     |                     |                    |                  |
|           |        |           |                     |                  |                  |                  |                        |          | to Ser-           | to Lys            | to His-           | to Cys            | Trp-1                  | to Lys            | to Met           | o Arg-             | to Thr              | to Glu              | to Thr            | 2 to Hi             | 4 to GI             |                  |                  |                  |                     |                     |                     | -                  |                  |
|           |        |           |                     |                  |                  |                  |                        |          | Lys-12 to Ser-18, | Lys-20 to Lys-25, | Thr-38 to His-43, | Lys-53 to Cys-64. | Ile-7 to Trp-17,       | Asn-54 to Lys-64, | Thr-85 to Met-91 | Gln-1 to Arg-7,    | Gly-18 to Thr-24,   | Glu-26 to Glu-32,   | His-76 to Thr-88, | Gln-122 to His-129, | Pro-184 to Glu-190. |                  |                  |                  |                     |                     |                     |                    | •                |
|           |        | -         |                     | •                |                  |                  |                        |          | 2429              |                   | <del>.</del>      |                   | 2430                   |                   | •                | 2431               |                     |                     |                   |                     |                     |                  | _                |                  |                     |                     |                     |                    |                  |
|           |        |           |                     | :                | ٠.               |                  |                        | -        | 342               |                   |                   |                   | 559                    |                   |                  | 523                |                     |                     |                   |                     |                     |                  | _                |                  |                     |                     |                     |                    |                  |
|           |        |           |                     |                  |                  |                  |                        |          | 94 - 342          | <u></u>           | ,                 |                   | 212 - 559              |                   | -                | 3 - 623            |                     |                     | <del>-</del>      | ·····               |                     |                  |                  |                  |                     |                     |                     |                    |                  |
|           |        |           |                     | _                |                  |                  |                        |          | 254               |                   |                   |                   | 255                    |                   |                  | 256                |                     |                     |                   |                     |                     |                  |                  |                  |                     |                     |                     |                    |                  |
|           |        | _         |                     |                  |                  |                  |                        |          | 754               |                   |                   |                   | 306                    |                   | -                | 918                |                     |                     |                   |                     | ,                   |                  |                  |                  |                     |                     |                     | _                  |                  |
|           |        |           |                     |                  |                  |                  |                        |          | 993754            |                   |                   |                   | 903806                 |                   |                  | 993918             |                     |                     |                   |                     |                     |                  |                  |                  |                     |                     |                     |                    |                  |
|           |        |           |                     |                  | _                | •                | _                      |          | 3N51              |                   |                   |                   | CT60                   |                   |                  | 3V81               |                     |                     |                   |                     |                     |                  |                  |                  |                     |                     |                     |                    |                  |
|           |        |           |                     |                  |                  |                  |                        |          | HODGN51           |                   |                   |                   | HODCT60                |                   |                  | HAQBV81            |                     |                     |                   |                     |                     |                  |                  |                  | _                   |                     |                     |                    |                  |

|                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | <u>.</u>            |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     | ٠                   | ,                   |                        |           |                     |                       |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|-----------------------|
|                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   | ·                   |                     |                     |                     |                     |                     |                        |           |                     |                       |
| H0295: 1, H0402: 1, | S0418: 1, S0442: 1, | S0132: 1, H0619: 1, | H0415: 1, H0586: 1, | L0623: 1, H0486: 1, | H0013: 1, S0280: 1, | L0021: 1, H0618: 1, | H0318: 1, H0052: 1, | H0251: 1, H0123: 1, | H0050: 1, H0012: 1, | S0051: 1, H0179: 1, | H0615: 1, T0006: 1, | H0673: 1, H0135: 1, | H0040: 1, H0087: 1, | H0264: 1, H0100: 1, | L0763: 1, L5565: 1, | L0667: 1, L0772: 1, | L0644: 1, L0775: 1, | L0375: 1, L0805: 1, | L0655: 1, L0659: 1, | L0526: 1, L0663: 1, | S0052: 1, H0682: 1, | H0660: 1, S0028: 1, | L0743: 1, L0750: 1, | L0756: 1, L0779: 1, | L0777: 1, L0755: 1, | L0592: 1, H0136: 1 and | S0424: 1. | H0486: 2, H0171: 1, | #1000 /: 4) 50000: 2) |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | !         |                     |                       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2432                |                       |
|                     |                     |                     |                     | _                   | -                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                        | •         | 1040 -              | 1,1,1                 |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 257                 |                       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | ,         | 993931              |                       |
|                     |                     | _                   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                      |           | HDTGF49             |                       |

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|--|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|
|  | •  |                     |                     |                     |                     |                     |                     |                     | -                   | _                   |                     |                     |                     |                     |                     |                     | -                   | _                   | •                   |                     |                     |                     |                     |                        |           |
| H0587: 1, H0013: 1,<br>H0318: 1, H0688: 1,<br>L0793: 1 and L0748: 1. | L0794: 6, L0438: 4,<br>L0758: 4, H0656: 3, | L0766: 3, L0748: 3, | L0731: 3, H0662: 2, | H0013: 2, H0529: 2, | L0655: 2, H0659: 2, | L0439: 2, L0751: 2, | L0779: 2, L0588: 2, | H0422: 2, L0785: 1, | S0420: 1, H0599: 1, | S0010: 1, H0327: 1, | H0024: 1, H0051: 1, | H0083: 1, L0194: 1, | L0055: 1, H0673: 1, | H0038: 1, H0551: 1, | H0561: 1, S0002: 1, | L0770: 1, L0761: 1, | L0764: 1, L0768: 1, | L0774: 1, L0775: 1, | L0806: 1, L0659: 1, | L0519: 1, L0666: 1, | S0126: 1, H0435: 1, | 50330: 1, S0380: 1, | S3014: 1, S0260: 1, | L0592: 1, L0485: 1 and | L0362: 1. |
|  | Phe-12 to Tyr-22,<br>Lys-34 to Ile-44.     |                     |                     | •                   |                     |                     |                     |                     |                     | 7                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                        |           |
|  | 2433                                       |                     |                     |                     |                     |                     |                     |                     |                     | ٠.                  |                     |                     |                     | _                   |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                        |           |
|  | 152 - 448                                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |
|  | 258  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |
|  | 994134                                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                        |           |
|  | HOGBN62                                    | -                   |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | ,                   |                        |           |

|   |  | 123270,<br>245200,<br>251600,<br>270100,<br>276900  |
|---|--|---|
|   |  | 14q32   |
| H0519: 1 and S3014: 1.  | L0747: 4, L0758: 3,<br>L0794: 2, L0649: 2,<br>L0749: 2, L0759: 2,<br>H0624: 1, H0333: 1,<br>L0598: 1, L0773: 1,<br>L0661: 1, L4501: 1,<br>S0126: 1, H0682: 1,<br>S0328: 1, H0521: 1,<br>L0748: 1, L0750: 1,<br>L0780: 1, L0750: 1 and<br>S0436: 1. | 15,<br>1,<br>0,   |
| Asp-8 to Glu-16,<br>Thr-24 to Lys-35,<br>Asn-37 to Glu-44,<br>Leu-65 to Asp-95. |  | Ala-41 to Ser-46, Gly-57 to Gly-62, Glu-91 to Asn-111, Glu-91 to Asn-111, Glu-91 to Asn-111, Glu-91 to Asn-111, H0009: 10, L0753: 1 Gln-113 to Pro-120, H0441: 9, L0439: 9, Val-128 to Ser-133, L0752: 9, S0358: 8, His-142 to Arg-149, H0253: 8, H0618: 7, Thr-177 to Leu-184, H0231: 7, L0769: 7, Arg-206 to Ile-214, H0144: 7, S0374: 7, Phe-261 to Trp-270, H0550: 6, L0775: 6, Asn-298 to Phe-305, L0745: 6, Gln-315 to Gly-320, S6024: 5, H0399: 5, L0750: 5, L0731: 5, S0007: 4, H0351: 4, |
| 2434  | 2435   | 2436  |
| 126 - 410   | 1065 - 706   | 1390 - 257  |
| 259   | 260  | 261   |
| 994234  | 994356   | 994536  |
| HSKGR42   | НОЕВQ85  | HOPJG01   |

| -                   |                     |                      |                     | <u>·</u>            |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                      |             |                     |   |
|---------------------|---------------------|----------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|--------------------|--|--------------------|--------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|---------------------|---------------------|---------------------|---------------------|----------------------|-------------|---------------------|---|
|                     |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                      |             |                     |   |
|                     |                     |                      | ·                   |                     | <u></u>            |                    |                     | .,                  |                     | <del></del>        |  |                    |                    |                      |                     |                     |                     | •                   |                     |                  |                     |                     |                     |                     |                      | _           |                     | ·                                       |
|                     |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                      |             |                     |   |
| <u> </u>            |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     |                     |                     |                     | · · · · · ·      |                     |                     |                     |                     |                      |             |                     |   |
| 4,                  | 4,                  | 4,                   | 4,                  | 4,                  | .;<br>,            | 7: 3,              | .3,                 | 5: 3,               | .3,                 | . 3,               | 3  | <u>.:</u>          | 1: 3,              | بئ                   | ε.;                 | 1:2,                | 2,                  | 2,                  | 2: 2,               | . 2,             | 7, 2,               | . 2,                | <del>1</del> : 2,   | 3: 2,               | 2,                   | ري          | 2,                  | <b>6</b> 6                              |
| S0049: 4, H0204: 4, | H0100: 4, L0509: 4, | .0542: 4, L.0783: 4, | .0742: 4, L0746: 4, | .0777: 4, L0366: 4, | 30300: 3, H0261: 3 | H0549: 3, H0497: 3 | H0156: 3, S0010: 3, | H0085: 3, N0006: 3, | S0003: 3, S0036: 3, | H0641: 3, L0770: 3 | .0499: 3, L0776: 3,                            | .0659: 3, L0665: 3 | H0519: 3, H0684: 3 | .0756: 3, L.0758: 3, | .0608: 3, S0424: 3, | H0506: 3, H0624: 2, | H0170: 2, S6026: 2, | H0592: 2, S0346: 2, | H0196: 2, H0235: 2, | H0596: 2, H0150: | H0103: 2, S0050: 2, | H0201: 2, T0010: 2, | H0213: 2, H0674: 2, | .0455: 2, H0038: 2, | .0764: 2, L.0766: 2, | L0782: 2,   | .0528: 2, L0666: 2, | .0438: 2, H0520: 2, H0672: 2, S0044: 2, |
| 49.4,               | .00:4,              | 42: 4,               | 42: 4,              | 77: 4,              | 00:3,              | 49: 3,             | 56: 3,              | 85: 3,              | 03: 3,              | 41: 3,             | 99: 3,   | 59: 3,             | 19:3,              | 56: 3,               | 08: 3,              | 506: 3,             | 70:2,               | 92: 2,              | 96: 2,              | 96: 2,           | 03: 2,              | 201: 2,             | 113: 2,             | 55: 2,              | 64: 2,               | .0375: 2, I | 28: 2,              | L0438: 2,<br>H0672: 2,                  |
| 800                 | H01                 | <u> 1</u> 03         | <u>10</u>           | 100                 | S03                | H05                | H01                 | <u>H0</u>           | 80                  | H06                | <u> </u>                                       | <u>1</u> 0         | H05                | <u>1</u> 02          | 9                   | H05                 | <u>E</u>            | H05                 | E E                 | H05              | <u>H</u>            | H02                 | H02                 | 2                   | 20                   | <u>103</u>  | 105                 | 7 H                                     |
|                     |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     | -                   | ,                   |                     |                  |                     |                     |                     |                     |                      |             | •                   |   |
|                     |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                      |             |                     |   |
| · ·                 |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                      |             |                     | ,                                       |
|                     |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                      |             |                     | :                                       |
|                     |                     |                      | -                   |                     |                    |                    |                     |                     |                     |                    | <u>.                                      </u> |                    |                    |                      |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                      | -           |                     | <u> </u>                                |
|                     |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     |                     |                     |                     |                  | ٠                   |                     |                     |                     |                      |             |                     |   |
|                     |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     | <del></del>         |                     | ····                |                  |                     |                     |                     |                     |                      |             | •                   |   |
|                     |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                      |             |                     |   |
|                     |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     |                     |                     | •                   |                  |                     |                     |                     |                     |                      |             |                     |   |
|                     |                     |                      |                     |                     |                    |                    |                     |                     |                     | <del>,</del>       | <del></del>                                    |                    |                    |                      |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                      |             |                     | 1                                       |
|                     |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                      |             |                     |   |
|                     |                     |                      |                     |                     |                    |                    |                     |                     |                     |                    |  |                    |                    |                      |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                      |             |                     | <u> </u>                                |

|                     |                  |                    | <del></del>      | <del>_</del> _     |                    |  |                  |                  |                  | -                |                  |                  |                  | .,.              | .,               |                  |                  |                  | -                  |                  |                |                  |                  |                    |                  |                  |                  | •   |                  |
|---------------------|------------------|--------------------|------------------|--------------------|--------------------|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|------------------|----------------|------------------|------------------|--------------------|------------------|------------------|------------------|---|------------------|
|                     |                  |                    |                  |                    |                    | <u>.                                    </u> |                  | •                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                |                  | ,                |                    |                  |                  |                  |   |                  |
| 2,                  | : 1,             |                    | 1,               | 1,                 | . 1,               | . 1,   | .1,              | . 1,             | 7: 1,            | : T,             | . 1,             | . 1,             | : 1,             | . 1,             | 2: 1,            | F. 1,            |                  | 3: 1,            | : 1,               | 3: 1,            | 7: 1,          | ): 1,            | 1,               | 2: 1,              |                  | ): 1,            | . 1,             | .1,   | : 1,             |
| S0028: 2, L0744: 2, | S0260: 2, H0685: | S0110: 1, H0176: 1 | S0442: 1, S0354: | S0360: 1, S0410: 1 | H0411: 1, H0369: 1 | H0431: 1, H0438:                             | H0333: 1, L0623: | H0013: 1, H0069: | H0427: 1, H0599: | H0434: 1, H0251: | H0183: 1, H0263: | H0205: 1, H0232: | H0545: 1, H0065: | H0569: 1, H0172: | H0081: 1, H0012: | H0620: 1, H0014: | S0362: 1, L0163: | H0051: 1, H0408: | S6028: 1, H0266: 1 | H0688: 1, H0428: | 0424: 1, H0617 | H0673: 1, H0169: | .0456: 1, H0135: | H0059: 1, H0102: 1 | S0038: 1, S0112: | H0494: 1, H0130: | H0529: 1, L0369: | .0520: 1, L0762: 1,                           | .0500: 1, L0638: |
| S                   | S                | SC                 | SC               | SC                 | H                  | Ħ  | Ĥ                | Ħ                | Ħ                | H                | H                |                  | Ï                | Ħ                | H                | Ħ                | S.               | Ĥ                | <u>X</u>           | 耳                | H              | H                | <u> </u>         | H                  | Š                | <u> </u>         | H                | <u>, , , , , , , , , , , , , , , , , , , </u> | J                |
|                     |                  |                    | •                |                    |                    |  |                  | _                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                |                  |                  |                    |                  | <del></del>      |                  | ,   |                  |
| <br>                |                  |                    |                  | . <u>-</u> -       |                    | ,  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                |                  |                  |                    |                  |                  |                  |   |                  |
|                     | 4                |                    |                  |                    |                    |  |                  |                  |                  | •                |                  |                  | _                |                  |                  | ÷                |                  | -                |                    |                  |                |                  |                  |                    |                  |                  |                  | ,   |                  |
|                     |                  |                    | <del></del>      |                    |                    |  |                  |                  |                  |                  |                  |                  |                  |                  | ,                |                  |                  |                  | <u></u>            |                  | ·              |                  |                  |                    |                  |                  |                  |   |                  |
|                     |                  |                    |                  |                    | <del></del> -      | ·  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <del></del>        |                  |                |                  |                  |                    |                  |                  | <u>.</u>         |   |                  |
|                     |                  |                    |                  |                    |                    |  |                  | - <u>-</u>       |                  |                  |                  |                  | _                |                  |                  |                  |                  |                  |                    |                  |                |                  |                  |                    |                  |                  | <u>.</u>         |   |                  |

| <del>.</del> .      |              |          |              |              |              |                      |              |                     |                     |                     |                     |              |                     |                      |                     |                      |                     |                |                       |                     |                      |                     |              |                     |                     | <u></u>             | •                   |                     |
|---------------------|--------------|----------|--------------|--------------|--------------|----------------------|--------------|---------------------|---------------------|---------------------|---------------------|--------------|---------------------|----------------------|---------------------|----------------------|---------------------|----------------|-----------------------|---------------------|----------------------|---------------------|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |              |          |              |              |              |                      |              |                     |                     |                     |                     |              |                     |                      |                     |                      |                     |                | 124080,               | 202010,             | 202010,              | 214400,             | 602476,      | 602667              |                     |                     | •                   |                     |
|                     |              |          |              |              |              |                      |              |                     |                     |                     |                     |              |                     |                      |                     |                      |                     |                | 8q21                  |                     |                      |                     |              |                     |                     |                     |                     |                     |
|                     |              |          |              |              | •            |                      |              |                     |                     |                     |                     | <u> </u>     | -                   |                      | •                   |                      |                     | 1.             |                       |                     |                      | <del></del>         |              |                     |                     | . <u> </u>          | <del></del>         |                     |
| .0627: 1, L0372: 1, | 1, 10364: 1, |          | I, L0805: 1, | 1, L0657: 1, | 1, L0384: 1, | .0809: 1, L.0530: 1, | 1, L0664: 1, | HO547: 1, H0689: 1, | H0682: 1, H0659: 1, | H0660: 1, L0355: 1, | S0378: 1, S3012: 1, | I, L0741: 1, | .0748: 1, L0751: 1, | .0786: 1, L.0757: 1, | S0031: 1, H0445: 1, | .0593: 1, L.0595: 1, | S0106: 1, S0011: 1; | l and H0008: 1 | L0748: 25, L0750: 16, | S0126: 6, L0751: 6, | .0752: 6, L.0758: 6, | .0770: 5, L0769: 5, | 5, L0740: 5, | .0754: 5, L0749: 5, | .0757: 5, H0341: 4, | H0494: 4, L0806: 4, | H0547: 4, H0666: 4, | .0747: 4, L0731: 4, |
| L0627: 1            | 1.0768-1     | L0803: 1 | L0784:       | L0653: 1     | L0526: ]     | T0803:               | L0368: 1     | H0547:              | H0682:              | H0660:              | \$0378:             | S3014: 1     | L0748:              | L0786:               | S0031:              | L0593:               | S0106:              | S0460: 1       | L0748                 | S0126: 0            | L0752: (             | 1.0770:             | L0771: 5, I  | L0754:              | L0757:              | H0494:              | H0547:              | L0747:              |
|                     |              |          |              |              |              | •                    |              |                     |                     |                     |                     |              |                     |                      |                     |                      |                     |                | Asn-1 to Arg-7,       | Ser-26 to Arg-31,   | Gln-36 to Trp-41,    | Pro-59 to Lys-66.   | •            |                     |                     |                     | :                   |                     |
|                     |              |          |              |              |              |                      |              |                     |                     |                     |                     |              |                     |                      |                     |                      |                     |                | 2437                  |                     |                      |                     |              |                     |                     |                     |                     |                     |
|                     |              |          |              |              |              |                      |              |                     |                     |                     |                     |              | ,                   |                      |                     |                      | -                   |                | 213 - 410             |                     |                      |                     |              |                     |                     |                     |                     |                     |
|                     |              |          |              |              |              |                      |              |                     |                     |                     |                     |              |                     |                      |                     |                      |                     |                | 297                   |                     |                      |                     |              |                     |                     |                     |                     |                     |
|                     |              |          |              |              |              |                      |              |                     |                     |                     |                     |              |                     |                      | . —                 |                      |                     |                | 994596                |                     |                      |                     |              |                     |                     |                     |                     |                     |
|                     |              |          |              |              |              |                      |              |                     |                     |                     |                     |              |                     |                      |                     |                      |                     |                | HKBAK06               |                     |                      |                     |              |                     |                     |                     | :                   |                     |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                     |                     |                    |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
| S0026: 4, H0663: 3, | H0413: 3, S0276: 3, | H0685: 2, H0650: 2, | H0393: 2, S0278: 2, | H0392: 2, H0486: 2, | H0535: 2, H0412: 2, | S0440: 2, L0646: 2, | .0764: 2, L0662: 2, | .0768: 2, L0774: 2, | .0793: 2, H0144: 2, | S0374: 2, H0659: 2, | S0152: 2, H0134: 2, | 0743: 2, L0744: 2, | .0588: 2, H0624: 1, | H0265: 1, S0040: 1, | S0358: 1, S0408: 1, | 0045: 1, H0333: 1, | H0250: 1, H0427: 1, | H0041: 1, H0050: 1, | .0471: 1, H0266: 1, | 0328: 1, H0615: 1, | H0031: 1, H0606: 1, | H0212: 1, H0038: 1, | H0634: 1, H0551: 1, | H0488: 1, H0560: 1, | H0625: 1, H0633: 1, | H0647: 1, H0646: 1, | S0422: 1, H0529: 1, | L0762: 1, L0772: 1, | .0643: 1, L0773: 1, |
| S                   | H                   | Ħ                   | Ī                   | H                   | H                   | S                   | <u> </u>            | ĭ                   | <u> </u>            | SC                  | S                   | <u> </u>           | ĭ                   | Ħ                   | <u>S</u>            | SC                 | Ĥ                   | Ħ                   | ĭ                   | Ī                  | H                   | Ĥ                   | H                   | <u> </u>            | 耳                   | <u> </u>            | S                   | <u>3</u>            | <u> </u>            |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                    |                     |                     |                     |                    |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     | -                   |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | -                   |                     | •                   |                     | •                   |                     |                     |                     |                    |                     |                     |                     | -                  |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                     |                     |                    |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |

|  | 124200,<br>147440,<br>160781,<br>181405,<br>261600,<br>601406,<br>601620,   |
|--|---|
| ·  | 12q24.1   |
| L0767: 1, L0364: 1,<br>L0766: 1, L0775: 1,<br>L0805: 1, L0776: 1,<br>L0655: 1, L0518: 1,<br>L0663: 1, H0711: 1,<br>H0690: 1, H0682: 1,<br>H0670: 1, S0380: 1,<br>S0013: 1, H0696: 1,<br>H0704: 1, H0631: 1,<br>H0595: 1, L0592: 1,<br>L0581: 1, L0594: 1,<br>L0601: 1, H0668: 1,<br>S0194: 1, H0543: 1 and | L0748: 9, L0758: 6,<br>L0775: 5, L0659: 4,<br>L0779: 4, L0752: 4,<br>S0360: 3, H0431: 3,<br>H0641: 3, L0764: 3,<br>L0776: 3, L0764: 3,<br>L0776: 3, L0765: 3,<br>L0776: 3, L0759: 3,<br>H0657: 2, S0358: 2,<br>H0615: 2, H0628: 2,<br>H0616: 2, L0770: 2,<br>L0766: 2, L0774: 2,<br>L0375: 2, L0787: 2, |
|  | Pro-1 to Ser-8.   |
|  | 2438  |
|  | 1016 - 486  |
|  | 263   |
|  | 994664  |
|  | HKGCN61   |

|                     |                     |                     |                      |                     |                    | _                |                    |                    |                     |               |                     |                     | _                |                    | -                  |                  |                  |                  |                    |                    |                  |                  |   |                    |                  |                  |                   | :                                      |
|---------------------|---------------------|---------------------|----------------------|---------------------|--------------------|------------------|--------------------|--------------------|---------------------|---------------|---------------------|---------------------|------------------|--------------------|--------------------|------------------|------------------|------------------|--------------------|--------------------|------------------|------------------|---|--------------------|------------------|------------------|-------------------|--|
|                     |                     | ·                   |                      |                     |                    |                  |                    |                    |                     |               |                     |                     |                  |                    |                    |                  |                  |                  |                    |                    |                  |                  |   | _                  | ·-               |                  |                   |  |
| 21: 2,              | 7:2,                | 0: 2,               | 6: 2,                | 6: 2,               | 6: 1,              | 3: 1,            | 59: 1,             | 2: 1,              | 74: 1,              | 6: 1,         | 12: 1,              | 0: 1,               | 4: 1,            | 19: 1,             | 15: 1,             | 7: 1,            | 22: 1,           | <u> </u>         | 56: 1,             | 6: 1,              | 51: 1,           | 50: 1,           | 38: 1,                                  | 6: 1,              | 7:1,             | 2: 1,            | 5: 1,             | .2: 1,<br>9: 1                         |
| H0648: 2, H0521: 2, | H0436: 2, S0027: 2, | .0743: 2, L0740: 2, | .0747: 2, L.0756: 2, | .0731: 2, L.0596: 2 | .0588: 2, H0686: 1 | S6024: 1, H0583: | H0656: 1, H0669: 1 | H0664: 1, S0222: 1 | H0438: 1, H0574: 1, | 0622: 1, L058 | H0599: 1, H0042: 1, | H0004: 1, S0010: 1, | S0182: 1, S0474: | H0052: 1, H0309: 1 | H0596: 1, H0545: 1 | S0388: 1, H0687: | H0039: 1, H0622: | F0006: 1, H0644: | H0165: 1, H0166: 1 | H0124: 1, S0036: 1 | H0038: 1, H0551: | H0100: 1, H0560: | H0646: 1, H0538: 1                      | S0422: 1, S0426: 1 | .0763: 1, L0637: | .0761: 1, L0372: | .0646: 1, L.0645: | .0521: 1, L0662: 1                     |
| H                   | <u> </u>            | 7                   | <u>7</u>             | <u>7</u>            | J                  | <u> </u>         | 五                  | 프                  | 프                   | <u> </u>      | 耳                   | I                   | <u> </u>         | <u> </u>           | 工                  | <u> </u>         | 正                | E                | 田                  | 耳                  | 三                | <u>E</u>         | <u> </u>                                | Š                  | <u> </u>         |                  | <u></u>           | <u> </u>                               |
|                     |                     |                     |                      | · · · · · ·         |                    |                  |                    |                    |                     | - 4           | <del>,</del>        |                     |                  |                    |                    |                  |                  | •••              |                    |                    |                  |                  | • |                    |                  | ·                |                   |  |
|                     | ·                   |                     |                      |                     |                    |                  |                    |                    |                     |               |                     |                     | <del></del>      |                    | -                  |                  | _                |                  | <u></u>            |                    |                  |                  |   |                    |                  |                  |                   |  |
|                     |                     |                     |                      |                     |                    |                  |                    |                    |                     |               |                     |                     |                  |                    | ·                  |                  |                  |                  | 41                 |                    |                  |                  |   |                    |                  |                  |                   | ······································ |
|                     |                     |                     |                      |                     |                    |                  |                    |                    |                     |               |                     |                     |                  |                    |                    |                  |                  |                  |                    |                    |                  |                  |   |                    |                  |                  |                   |  |
|                     |                     |                     |                      |                     |                    |                  |                    |                    |                     |               |                     |                     |                  |                    |                    |                  |                  |                  |                    |                    |                  |                  |   |                    |                  |                  |                   |  |

| Г  |   | I  |                     |
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|  |   | 5p15.2-pter  |                     |
| 20809: 1, L0656: 1,<br>20809: 1, L0647: 1,<br>20788: 1, L0790: 1,<br>20664: 1, L0665: 1,<br>80374: 1, H0519: 1,<br>H0689: 1, H0682: 1, | H0651: 1, S0330: 1,<br>H0539: 1, S0330: 1,<br>H0522: 1, H0696: 1,<br>S0028: 1, S0206: 1,<br>L0745: 1, L0749: 1,<br>L0780: 1, L0755: 1,<br>H0445: 1, L0605: 1,<br>L0366: 1 and H0423: 1. | L0659: 4, L0666: 4,<br>L0665: 4, H0486: 3,<br>L0663: 3, L0759: 3,<br>L0471: 2, H0288: 2,<br>H0031: 2, L0769: 2,<br>L0646: 2, L0794: 2,<br>L0766: 2, L0657: 2,<br>L0664: 2, L0601: 2,<br>H0422: 2, H0265: 1,<br>H0556: 1, H0224: 1,<br>H0586: 1, S0376: 1,<br>S0358: 1, S0376: 1, | S0046: 1, S0132: 1, |
| L0657: 1<br>L0809: 1<br>L0788: 1<br>L0664: 1<br>S0374: 1<br>H0689: 1   | H0651: H0539: H0522: S0028: 1 L0745: 1 L0745: H0445: H0445: H0445: H0366: H   | 10665<br>10663<br>10663<br>10646<br>10646<br>10664<br>10664<br>10686<br>10785<br>10785<br>10785  | S0046               |
|  |   |  | •                   |
|  |   | ·  |                     |
|  |   | 2439   | :                   |
|  |   | 2 - 289  |                     |
|  |   | 264  | :                   |
|  |   | 994699   |                     |
|  |   | HTXDY55  |                     |

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|---------------------|---|--------------|----------|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|
|                     |   |              |          |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                      |           | - 5g                | :                   |                     |                     |                     |                     |                     |                        |           |
| H0550: 1, H0586: 1, | • | <del>_</del> | <u>_</u> | <del>_</del> | L0055: 1, H0135: 1, | H0040: 1, H0551: 1, | H0494: 1, H0560: 1, | S0150: 1, S0344: 1, | L0625: 1, L0761: 1, | L0553: 1, L0662: 1, | L0649: 1, L0803: 1, | L0650: 1, L0805: 1, | L0606: 1, H0519: 1, | H0684: 1, H0435: 1, | H0660: 1, H0648: 1, | S0380: 1, S0152: 1, | H0696: 1, L0786: 1, | L0780: 1, L0755: 1, | L0596: 1, H0216: 1 and | H0543: 1. | S0212: 2, S0360: 2, | S0276: 2, H0218: 1, | H0125: 1, H0587: 1, | H0497: 1, H0581: 1, | H0251: 1, H0354: 1, | H0428: 1, H0413: 1, | L0526: 1, H0522: 1, | H0627: 1, S0192: 1 and | S0194: 1. |
|                     |   |              |          | •            |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Gly-18 to Gly-28,   | Arg-30 to Lys-51,   |                     | 5                   |                     |                     |                     |                        |           |
|                     |   |              |          |              |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2440                |                     |                     |                     |                     |                     |                     | •                      |           |
|                     |   |              |          |              |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 19 - 513            |                     |                     |                     |                     |                     |                     |                        |           |
|                     |   |              | -        |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 265                 |                     |                     |                     |                     |                     |                     |                        |           |
|                     | - |              |          |              |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                        |           | 994776              |                     |                     |                     |                     |                     |                     | •                      |           |
|                     |   |              |          |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HFOYI37             |                     |                     |                     |                     |                     |                     |                        |           |

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|--|------------------|--|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|
|  |                  |  |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     | •                   |                     |                     |  |
| AR039: 15, AR089: 8,<br>AR033: 8, AR096: 8,<br>AR053: 7, AR052: 7,<br>AR060: 5, AR055: 5,<br>AR104: 5, AR061: 3<br>H0415: 1 and H0414: |                  | L0731: 8, L0757: 6,<br>L0794: 5, L0809: 5, | L0770: 3, L0803: 3, | L0789: 3, L0750: 3, | L0759: 3, H0038: 2, | L0769: 2, L0805: 2, | _ | S0037: 2, L0742: 2, | L0743: 2, L0748: 2, | L0754: 2, L0747: 2, | L0758: 2, S0436: 2, | L0599: 2, L0608: 2, | H0624: 1, H0661: 1, | H0638: 1, S0358: 1, | H0728: 1, H0733: 1, | H0586: 1, H0587: 1, | H0642: 1, S0010: 1, | H0052: 1, H0544: 1, | H0046: 1, L0471: 1, | H0083: 1, H0179: 1, | H0252: 1, H0688: 1,<br>H0617: 1, H0606: 1, |
| Ser-26 to Pro-33.  | Asp-1 to Gly-15. | Ser-157 to Asn-167,<br>Asn-192 to Lys-198. | •                   |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
| 2441   | 2442             | 2443                                       |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :  |
| 1 - 405  | 3 - 1175         | 1670 - 360                                 |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     | ·<br>ì                                     |
| 266  | 267              | 268  |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
| 994874   | 994954           | 994993                                     |                     |                     | ٠                   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
| HOFNL18  | HOFNT57          | HCBMT45                                    |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |  |

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| H0673: 1, H0135: 1,<br>H0264: 1, H0059: 1,<br>H0560: 1, S0440: 1,<br>S0150: 1, H0633: 1,<br>S0344: 1, S0002: 1,<br>L3904: 1, L0800: 1,<br>L0773: 1, L0804: 1,<br>L0774: 1, L0775: 1,<br>L0806: 1, H0144: 1,<br>H0684: 1, H0519: 1,<br>H0684: 1, H0519: 1,<br>H0651: 1, H0521: 1,<br>L0740: 1, L0749: 1,<br>L0752: 1, H0595: 1, | L0438: 2, H0156: 1,<br>H0004: 1, L0748: 1 and<br>L0749: 1.  | L0771: 6, L0794: 4, 20<br>L0748: 4, H0659: 3,<br>L0749: 3, H0624: 2, |
|  | Thr-23 to Pro-34,<br>Glu-39 to Asp-83,<br>Asn-89 to Lys-99,<br>Asp-118 to Asp-<br>128,<br>Asn-135 to Glu-150,<br>Glu-153 to Gly-168,<br>Gly-181 to Thr-187,<br>Arg-200 to Asp-205,<br>Arg-273 to Ile-279,<br>Thr-295 to Asp-300,<br>Thr-316 to Cys-321. | Ser-14 to Ala-21,<br>Pro-80 to Tyr-85,<br>Pro-99 to Gly-105,         |
|  | 2444  | 2445   |
|  | 120 - 1154  | 2 - 520  |
|  | 269   | 270  |
|  | 995200  | 995229   |
|  | HATDZ56   | носої44  |

|   |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          | <u> </u>         |                  |                     |                     |                     |                     |                     |                     |                     |                     | _                |
|---|---------------------|------------------|---------------------|------------------|------------------|------------------|------------------|------------------|-----------|--------------|----------|------------|-------------|------------------|--------------|----------|--------|----------|------------------|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|
|   |                     |                  |                     | •                |                  |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     |                     |                     |                     |                     |                     |                     |                  |
|   |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     |                     |                     |                     |                     |                     | :                   |                  |
|   |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     | _                   |                     |                     |                     |                     | <del></del>         |                  |
|   |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     |                     |                     |                     |                     |                     | ,                   | i                |
|   |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  | <del>-</del> |          |        |          |                  |                  |                     |                     | _                   |                     |                     |                     |                     |                     |                  |
| 2,                                      | 2,                  | ۲,               | 2,                  | Ť,               | . T,             | 1,               | ; <del>1</del> , | : 1,             | .;<br>;   | : 1 <b>,</b> | : 1,     | 1,         | 1,          | <br>             | <del>_</del> | .;       | 1,     | . 1,     | : I,             | 1,               | <br>                | 543: 1              | 3: 4,               |                     | .2,                 | . 2,                | . 2,                | 2,                  | : 1,             |
| 30360                                   | .0769: 2, L0764: 2, | H0660: 2, L0779: | .0608: 2, L.0601: 2 | S0026: 2, S0418: | S0410: 1, H0393: | .0579: 1, L0471: | H0266: 1, H0252: | HO673: 1, H0090: | 1, H0087: | l, H0538:    | , L0761: | L0648:     | .0766:      | .0381: 1, L0775: | L0378:       | , L0657: | L0788: | , H0690: | H0682: 1, H0631: | .0751: 1, L0754: | .0747: 1, L.0758: 1 | .0759: 1 and H0543: | S0440: 4, H0543: 4, | H0656: 3, H0539: 3, | H0521: 3, H0650: 2, | H0341: 2, H0620: 2, | H0355: 2, H0068: 2, | [0041: 2, H0529: 2, | .0439: 2, H0171: |
| 3: 2, 5                                 | 3: 2, I             | 0:2,1            | 8: 2, I             | 5: 2, S          | ): 1, F          | 9: 1, I          | 6: 1, I          | 3: 1, I          | 8: 1, I   | 3: 1, 1      | 5: 1, I  | 0642: 1, I | .0768: 1, I | 1: 1, I          | 6: 1, I      |          |        | 3: 1, F  | 2: 1, 1          | 1: 1, I          | 7: 1, I             | 9: 1 au             | 40:4,               | 6:3,1               | 1:3,1               | 1: 2, 1             | 5:2,1               | 1: 2, F             | 9: 2, I          |
| 990H                                    | F076                | 990H             | F060                | S002             | S041(            | L057             | H026             | L90H             | H0038:    | H0413: 1     | H0695: 1 | 1064       | 1076        | 1038             | 1.0376:      | 1.0806:  | 1065   | L0663: 1 | 890H             | 1075             | L074                | 1075                | S04                 | H065                | H052                | H034                | H035                | T004                | 1.043            |
| Lys-158 to Pro-173. H0663: 2, S0360: 2, |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     |                     |                     |                     |                     |                     |                     |                  |
| to Pro                                  |                     | •                |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     |                     |                     |                     |                     |                     |                     |                  |
| -158                                    |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  | •            |          |        |          |                  |                  |                     |                     |                     |                     |                     |                     | ٠.                  |                     |                  |
| Ly                                      |                     |                  |                     |                  |                  |                  |                  |                  |           |              | •        |            |             |                  |              |          |        |          |                  |                  |                     |                     | _                   |                     |                     |                     |                     |                     |                  |
|   |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     | 2446                |                     |                     |                     |                     |                     |                  |
|   |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  | •            |          |        |          |                  |                  |                     |                     | 200                 |                     |                     |                     |                     |                     |                  |
|   |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     | 1 - 1002            |                     |                     |                     |                     | •                   |                  |
|   |                     | ·                |                     |                  | <del></del>      |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     | 271                 |                     |                     |                     |                     |                     |                  |
|   |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     |                     |                     |                     |                     |                     |                     |                  |
|   |                     |                  |                     |                  |                  | •                |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     | 995562              |                     |                     |                     |                     |                     |                  |
| _                                       | _                   |                  |                     |                  |                  |                  |                  | _                |           |              |          |            |             |                  |              |          |        |          |                  |                  | -                   |                     | 8                   |                     |                     |                     |                     |                     |                  |
|   |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  | _                   |                     | G43                 |                     |                     |                     |                     |                     |                  |
|   |                     |                  |                     |                  |                  |                  |                  |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     | HNOJG43             |                     |                     |                     | ,                   |                     |                  |
|   |                     |                  |                     |                  |                  |                  | -                |                  |           |              |          |            |             |                  |              |          |        |          |                  |                  |                     |                     | Ξ                   |                     |                     |                     |                     |                     |                  |

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|                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        |                       |                      |   |
| S0114: 1, H0657: 1, | S0356: 1, S0442: 1, | S0354: 1, S0410: 1, | H0580: 1, H0728: 1, | S0046: 1, S0132: 1, | S0476: 1, S0222: 1, | H0610: 1, H0613: 1, | H0600: 1, H0587: 1, | H0013: 1, H0505: 1, | H0318: 1, H0309: 1, | H0046: 1, H0009: 1, | L0471: 1, S0051: 1, | H0356: 1, H0510: 1, | S6028: 1, H0687: 1, | H0292: 1, H0428: 1, | H0708: 1, H0494: 1, | H0560: 1, S0294: 1, | <br>L0647: 1, H0726: 1, | H0547: 1, H0658: 1, | H0670: 1, H0518: 1, | S0152: 1, H0522: 1, | S0044: 1, H0555: 1, | S3014: 1, S0027: 1, | L0753: 1, L0731: 1, | L0362: 1, H0542: 1, | H0423: 1 and H0506: 1. | L0755: 16, L0754: 14, | L0591: 11, S0408: 9, | Ser-158 to Met-163, H0441: 9, L0748: 9, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        | Pro-57 to Pro-64,     | Leu-137 to Ala-147,  | Ser-158 to Met-163,                     |
|                     | _                   |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        | 2447                  |                      |   |
|                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     | ,                   |                     |                     |                     |                     |                        | 2 - 838               |                      |   |
|                     |                     |                     |                     | ·                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        | 272                   |                      |   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        | 995590                |                      |   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     | -                   |                     |                     |                     |                        | HSPSB95               | •                    |   |

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|---|---------------------|---|--------------------|--------------------|-------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|-------------|--------------------|--------------------|------------------|---------------------|--------------------|---------------------|--------------------|------------------|-------------|---------------------|--------------------|------------------|
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| 76: 7,<br>35: 6,  | 49: 6,              | 39: 0,<br>58: 6,                          | 46: 5,             | 71: 5,             | L0731: 5,   | 34: 4,              | 50: 4,                | 83: 4,              | 74: 4,              | 38: 4,              | 77: 4,              | 65: 3,             | 32: 3,             | 81:3,              | 1.0471: 3,  | 87: 3,             | 51: 3,             | 17: 3,           | 66: 3,              | 58: 3,             | 21: 3,              | 42: 3,             | 97:3,            | L0589: 3,   | 85: 3,              | 24: 2,             | 18: 2,           |
| 7, L07<br>7, H01  | 5, L06              | , LO4                                     | 5, H00             | , L07              | 5, 1.07     | 5, S01              | , S03                 | 4, HOC              | t, L07              | 7,124               | 4, L07              | F, H02             | 3, S01             | 3, H05             | 3, L04      | 3, H06             | 3, H05             | 3, L05           | , LO6               | 3, H06             | 3, H05              | , L07              | 3, LO5           | 3, 1.05     | <br>421,            | 3, H06             | 2, S04           |
| )657: 7<br>747: 7   | H0494: 6, L0649: 6, | 1054/: 6, L0439: 6,<br>0752: 6, 1,0758: 6 | H0341: 5, H0046: 5 | .0769: 5, L0771: 5 | H0519: 5, I | H0543: 5, S0134: 4, | \$0358: 4, \$0360: 4, | H0486: 4, H0083: 4, | H0509: 4, L0774: 4, | .0655: 4, L0438: 4, | H0520: 4, L0777: 4, | .0757: 4, H0265: 3 | H0580: 3, S0132: 3 | H0575: 3, H0581: 3 | H0052: 3, I | H0266: 3, H0687: 3 | H0428: 3, H0551: 3 | H0529: 3, L0517: | .0519: 3, L0666: 3, | H0593: 3, H0658: 3 | H0648: 3, H0521: 3, | S0028: 3, L0742: 3 | .0749: 3, L0597: | .0588: 3, 1 | .0592: 3, L0485: 3, | .0600: 3, H0624: 2 | H0170: 2, S0418: |
| 47, HC<br>68. LO  | Ħ                   | <u> </u>                                  | ĬĦ                 | 2                  | 王           | 王                   | SO                    | Ħ                   | Ħ                   | 걸                   | Ħ                   | <u> </u>           | Ħ                  | 王                  | Ħ           | 茁                  | Ħ                  | Ħ                | <u> </u>            | Ĭ                  | H                   | <u>8</u>           | <u> </u>         |             | <u> </u>            | <u> </u>           | 王                |
| Arg-239 to Phe-247, H0657: 7, L0776: 7, Leu-263 to Asn-268, L0747: 7, H0135: 6, |                     |   |                    |                    |             |                     |                       |                     |                     |                     |                     |                    |                    |                    |             |                    |                    |                  |                     |                    |                     |                    |                  |             |                     |                    |                  |
| 239 to<br>263 to  |                     |   |                    |                    |             |                     |                       |                     |                     |                     |                     |                    |                    |                    |             |                    |                    |                  |                     |                    |                     |                    |                  |             |                     | ı                  |                  |
| Arg-7   |                     |   |                    |                    |             |                     |                       |                     | •                   |                     |                     |                    |                    |                    |             |                    |                    |                  |                     |                    |                     |                    |                  |             |                     |                    | ٠                |
|   |                     |   |                    |                    |             |                     |                       |                     |                     |                     |                     |                    |                    |                    |             |                    |                    |                  |                     | •                  |                     |                    |                  |             |                     | •                  |                  |
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| L                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      | _                    |           |
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| 2,                  | 2,                  | 2,                  | 4                   | 2,                  | .,2                 | 4                   | ۲,                  | 2,                  | 2,                  | ÷,                  | .2                  | 2,                  | 2,                  | 2,                  | 2,                  | 2,                   | ર્વ                 | .;<br>2,            | <br>2,              | .,                  | 2,                  | ς <u>΄</u>          | ر,                  | 2,                  | 4,                  | <u>2</u>            | 2,                   | 7,                   | 2,        |
| 356:                | )208:               | )619                | 7117                | 0492                | 0318                | 251                 | 0242                | )214:               | 0622                | 9644                | 0087                | 0056                | 460                 | 0641                | 422:                | )766:                | )659:               | 2144                | 6890                | 0659                | 0672                | 84                  | 74.                 | 7750                | 7753:               | 0596                | 581:                 | 594                  | L0362: 2, |
| 2, S0               | 2, H(               | 2, H(               | 2, L                | 2, H                | 2, H                | 2, H(               | 2, H                | 2, S(               | 2, H                | 2, H                | 2, H                | 2, H                | 2, SC               | 2, H(               | 2, SC               | 2, LC                | 2, L                | 2, H                | 2, H                | 2, H                | 2, H                | 2, S(               | 2, L(               | 2, I                | 2, L                | 2, L                | 2, L                 | 2, L                 | 2, LC     |
| S0420: 2, S0356: 2, | S0444: 2, H0208: 2, | S0045: 2, H0619: 2, | H0393: 2, L0717: 2, | H0586: 2, H0492: 2, | H0427: 2, H0318: 2, | S0049: 2, H0251: 2, | H0050: 2, H0242: 2, | H0288: 2, S0214: 2, | H0615: 2, H0622: 2, | H0031: 2, H0644: 2, | H0628: 2, H0087: 2, | H0413: 2, H0056: 2, | S0438: 2, S0440: 2, | S0150: 2, H0641: 2, | S0344: 2, S0422: 2, | .0764: 2, L.0766: 2, | .0653: 2, L0659: 2, | .0665: 2, H0144: 2, | H0691: 2, H0689: 2, | H0711: 2, H0659: 2, | H0660: 2, H0672: 2, | H0710: 2, S0044: 2, | S0406: 2, L0744: 2, | .0740: 2, L0750: 2, | .0780: 2, L0753: 2, | H0445: 2, L0596: 2, | .0605: 2, L.0581: 2, | .0599: 2, L.0594: 2, | L0595: 2, |
| 80                  | 80                  | S                   | ឣ                   | 유                   | 出                   | <u>8</u>            | 至                   | 田                   | 丑                   | H                   | <u> </u>            | 呈                   | 80                  | 80                  | 80                  | ្ឋ                   | <u>ន</u>            | ្ឋ                  | 丑                   | 丑                   | 呈                   | H                   | 80                  | ន                   | <u> </u>            | 丑                   | <u> </u>             | <u>ප</u>             | 2         |
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| $\vdash$            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     | ٠.                  |                     |                     |                     |                     |                     |                     |                      | -                    |           |
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| L                   | -                   |                     |                     |                     | e                   |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     | •                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                      |           |
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| .0603: 2, H0136: 2, | H0423: 2, H0422: 2, | H0293: 2, H0171: 1, | T0002: 1, H0222: 1, | H0159: 1, H0685: 1, | H0295: 1, H0294: 1, | .0785: 1, H0661: 1, | H0663: 1, S0376: 1, | H0340: 1, H0351: 1, | S0222: 1, H0392: 1, | H0497: 1, H0574: 1, | H0013: 1, H0250: 1, | H0156: 1, H0599: 1, | H0042: 1, T0082: 1, | S0010: 1, H0263: 1, | F0115: 1, T0110: 1, | H0546: 1, H0545: 1, | H0019: 1, H0012: 1, | H0047: 1, H0197: 1, | H0023: 1, H0020: 1, | H0107: 1, T0010: 1, | H0510: 1, S0250: 1, | S0022: 1, H0328: 1, | • | <br>H0674: 1, L0456: 1, | H0708: 1, H0068: 1, | H0376: 1, H0163: 1, | H0040: 1, H0634: 1, | r0067: 1, H0487: 1, |
|                     | <u> </u>            | <u> </u>            | I                   | والم                | <u> </u>            | <u></u>             | <u>, p-1-1</u>      | <u> </u>            |                     |                     |                     | <u> Privi</u>       |                     |                     |                     | <u></u>             |                     |                     |   |                         | <u> </u>            |                     | <b>H</b>            |                     |
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| H0412: 1, H0623: 1, | H0059: 1, H0100: 1, | S0016: 1, H0633: 1, | H0646: 1, H0649: 1, | S0144: 1, L0598: 1, | L0369: 1, L0763: 1, | L0631: 1, L0770: 1, | L0637: 1, L0761: 1, | L0373: 1, L0372: 1, | L0773: 1, L0662: 1, | L0626: 1, L0364: 1, | L0794: 1, L0549: 1, | L0498: 1, L0803: 1, | L0775: 1, L0375: 1, | L0651: 1, L0661: 1, | L0540: 1, L0518: 1, | L0783: 1, L0383: 1, | L0382: 1, L0809: 1, | L0528: 1, L0368: 1, | L0532: 1, L0663: 1, | L0664: 1, S0216: 1, | H0698: 1, S0374: 1, | S0122: 1, H0683: 1, | H0684: 1, H0435: 1, | H0670: 1, S0328: 1, | S0330: 1, H0539: 1, | S0380: 1, H0522: 1, | S0013: 1, H0696: 1, | H0134: 1, S3012: 1, | S0027: 1, L0759: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     | -                   |                     | <u>.</u>            |                     |
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|                    |                     | ; 1·                |                  | _                  | · ·                |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del> .    |                  |                  |                  |                  |                  |                  |                  | -                |                  |                  |                  |                  |                     | -                  |
| .0681: 1,          | 0192: 1,            | d H0542             | S0027: 4         | 0318:3,            | .0776: 3,          | 0439: 3,            | 10265: 2,           | 10661:2             | 10351: 2,           | 10039: 2            | 0374: 2,            | 0330: 2,            | 3014: 2,            | 0748: 2,            | .0749: 2,        | 10423: 2,        | .0615: 1,        | [0294: 1,        | 10657: 1         | 10484: 1         | 10255: 1         | 0418: 1,         | 0356: 1,         | 0360: 1,         | 10580: 1         | 0132: 1,         | 10486: 1         | 10042: 1            | 10596: 1           |
| H0444: 1, L0681: 1 | S0011: 1, S0192: 1, | S0276: 1 and H0542: | H0556: 4, S0027: | S0358: 3, H0318: 3 | H0545: 3, L0776: 3 | S0380: 3, L0439: 3, | L0747: 3, H0265: 2  | H0341: 2, H0661: 2, | S0045: 2, H0351: 2, | H0012: 2, H0039: 2, | L0766: 2, S0374: 2, | S0126: 2, S0330: 2, | S0152: 2, S3014: 2, | S0206: 2, L0748: 2, | L0740: 2, L0749: | L0755: 2, H0423: | H0624: 1, L0615: | S0040: 1, H0294: | H0650: 1, H0657: | H0656: 1, H0484: | H0483: 1, H0255: | H0663: 1, S0418: | S0420: 1, S0356: | S0442: 1, S0360: | H0637: 1, H0580: | S0046: 1, S0132: | H0586: 1, H0486: | H0013: 1, H0042: 1, | H0052: 1, H0596: 1 |
|                    | <u> </u>            | 2                   |                  |                    |                    |                     |                     | Pro-120 to Gly-128, | Pro-130 to Asp-143, | Lys-197 to Ser-211, |                     | ,                   | <u> </u>            | -24                 |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                     |                    |
|                    |                     |                     | Gly-1 to Ala-15, | Ala-38 to Asp-46,  | Thr-56 to Leu-63,  | Glu-77 to Gly-83,   | Ile-102 to Gly-111, | Pro-120 tc          | Pro-130 tc          | Lys-197 to          | Pro-217 tc          |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                     |                    |
|                    |                     |                     | 2448             |                    |                    |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | :                   |                    |
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|                    |                     |                     | 273              |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                     |                    |
|                    |                     |                     | 908566           |                    |                    |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | •                   |                    |
|                    | <del> ,</del>       |                     | HCORG29          |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                     |                    |

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|---|---|
|   | 8q21  |
| H0327: 1, S0388: 1,<br>H0275: 1, H0083: 1,<br>S0022: 1, S0214: 1,<br>H0052: 1, H0604: 1,<br>H0053: 1, H0628: 1,<br>H00673: 1, H0135: 1,<br>H00616: 1, H0591: 1,<br>H0059: 1, H0494: 1,<br>L0475: 1, H0623: 1,<br>H0131: 1, S0344: 1,<br>L0770: 1, L0769: 1,<br>L0772: 1, L0804: 1,<br>L0772: 1, L0804: 1,<br>L0773: 1, H0144: 1,<br>H0593: 1, H0144: 1,<br>H0593: 1, H0596: 1,<br>H0670: 1, H0704: 1,<br>H0670: 1, H0704: 1,<br>H0670: 1, H0704: 1,<br>H0670: 1, H0704: 1,<br>H0670: 1, H0704: 1,<br>H0670: 1, H0704: 1,<br>H0670: 1, H0704: 1,<br>H0670: 1, H0704: 1,<br>H0670: 1, H0704: 1, | S0356: 1 and L0780: 1. 8q21                                   |
|   | Phe-3 to Ala-9.   |
|   | 2449  |
|   | 537 - 319   |
|   | 274   |
|   | 995894  |
|   | HCRNO02   |

|                     |                     |                     |                     |                                      |   |                        |           | Γ                     |                      |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                      | •                   |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|--------------------------------------|---|------------------------|-----------|-----------------------|----------------------|---------------------|---------------------|---------------------|---|---|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                                      |   |                        |           |                       |                      |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                                      |   |                        |           |                       |                      |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                                      |   |                        |           |                       |                      |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                      |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                                      |   |                        |           |                       |                      |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     | :                   |                     |
| H0670: 3, H0624: 1, | H0661: 1, S0354: 1, | S0360: 1, S0278: 1, | H0559: 1, H0150: 1, | 124: 1, H0510: 1,                    | 51: 1, H0413: 1,                        | S0328: 1, H0555: 1 and | .0759: 1. | H0046: 22, H0547: 15, | .0748: 13, S0152: 9, | H0013: 7, H0009: 7, | H0031: 7, H0529: 7, | H0519: 7, L0471: 6, | )24: 6, H0266: 6,                       | 90: 6, H0520: 6,                        | H0542: 6, H0543: 6, | H0521: 5, L0439: 5, | H0422: 5, S0420: 4, | H0373: 4, H0040: 4, | H0494: 4, H0561: 4, | .0747: 4, L.0592: 4, | .0593: 4, L0595: 4, | S0026: 4, H0423: 4, | H0556: 3, H0657: 3, | H0656: 3, L0005: 3, | S0354: 3, S0408: 3, | H0580: 3, S0045: 3, | S0046: 3, S0132: 3, | S0278: 3, H0586: 3, | F0110: 3, H0620: 3, |
| H                   | 90H                 | S03                 | H05                 | ) <u>,</u><br>H00                    | 7. HOS                                  | <b>S03</b>             | L07       | 田田                    | 107                  | <u>H</u> 00         |                     |                     | <u>)</u><br>三                           | . H00                                   | HOS                 | H05                 | H04                 | H03                 | H04                 | 107                  | 1.05                | <u>S</u> 00         | H05                 | HOG                 | S03                 | HOS                 | 200                 | S02                 | <u>13</u>           |
| Pro-9 to Gln-15,    | Glu-37 to Ala-49,   | Glu-70 to Leu-78,   | Thr-99 to Thr-122,  | Leu-144 to Gln-150, H0024: 1, H0510: | Gln-161 to Arg-167. H0551: 1, H0413: 1, | •                      |           | Arg-4 to Gly-24,      | Lys-47 to Phe-55,    | Lys-61 to Ala-67,   | Gly-108 to Thr-114, | Pro-184 to Pro-191, | Pro-292 to Arg-299, H0024: 6, H0266: 6, | Pro-355 to Glu-392. H0090: 6, H0520: 6, |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 2450                |                     |                     |                     |                                      |   |                        |           | 2451                  |                      | -                   |                     |                     |   |   |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     | ;                   |                     |
| 42 - 701            |                     |                     |                     |                                      |   |                        |           | 84 - 1259             |                      |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     | -                   |                     |                     |                     |                     |
| 275                 |                     |                     |                     |                                      |   |                        |           | 276                   |                      |                     | ,                   |                     |   |   |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| 996247              |                     |                     |                     |                                      |   |                        |           | 996337                |                      |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HCBOI79             |                     |                     |                     |                                      |   |                        |           | HVCAB73               | ,                    |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                      |                     |                     |                     | ,                   | ,                   |                     |                     |                     |                     |

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|                 |                     |                     |                     |                     |                     | *.                  |                     |                     | <del></del> -       | ···                 |                     |                     |                     |                     |                     | ·                   |                     | ,                   |                     | · <u> </u>          |                                       |                     |                     |                     |                     |                     |                     |              |              |
| H0083-3 S0022-3 | H0615: 3, H0135: 3, | H0591: 3, H0623: 3, | H0538: 3, H0144: 3, | .0438: 3, H0624: 2, | H0265: 2, T0002: 2, | S0116: 2, H0341: 2, | S0418: 2, S0442: 2, | S0358: 2, H0619: 2, | S0222: 2, H0587: 2, | H0497: 2, H0331: 2, | H0486: 2, H0069: 2, | H0635: 2, H0575: 2, | H0318: 2, H0581: 2, | H0052: 2, H0544: 2, | H0292: 2, S0003: 2, | H0622: 2, H0553: 2, | H0038: 2, H0634: 2, | H0551: 2, H0379: 2, | H0412: 2, H0056: 2, | H0100: 2, S0144: 2, | S0142: 2, L0626: 2,                   | S0126: 2, H0435: 2, | H0666: 2, S0330: 2, | H0436: 2, H0626: 2, | H0631: 2, S0027: 2, | S0028: 2, L0740: 2, | .0750: 2, H0445: 2, | 2, L0588: 2, | 2, H0170: 1, |
| H0083           | H0615:              | H0591:              | H0538:              | 1.0438:             | H0265:              | S0116:              | S0418:              | S0358:              | S0222:              | H0497:              | H0486               | H0635               | H0318:              | H0052               | H0292               | H0622               | H0038               | H0551:              | H0412               | H0100               | S0142:                                | S0126:              | 9990H               | H0436               | H0631:              | S0028:              | 1.0750:             | S0434: 2,    | L0600: 2,    |
|                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     | *******             |                     |                     |                                       |                     |                     |                     |                     |                     |                     |              |              |
|                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                                     |                     |                     |                     |                     |                     |                     |              |              |
|                 |                     |                     | ,                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | · · · · · · · · · · · · · · · · · · · |                     | -                   |                     |                     |                     |                     | •            |              |
|                 |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                                       |                     |                     |                     |                     |                     | <del>". '\</del>    |              |              |
|                 |                     |                     |                     |                     |                     | <u>.</u>            | <u> </u>            |                     |                     |                     |                     | ···                 |                     |                     |                     |                     |                     |                     |                     |                     |                                       |                     |                     |                     | <u>.</u>            | _                   |                     |              |              |
|                 |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | <u>-</u>            |                     |                     |                     |                     |                     |                     |                                       |                     |                     |                     |                     |                     |                     |              |              |

|           | _                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       |                     |                    | _                |                  |                  |                  |
|-----------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|--------------------|-------|---------------------|--------------------|------------------|------------------|------------------|------------------|
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|           |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  | ٠                |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |
|           |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |
|           |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |
|           |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       | . <u>.</u>          |                    | -                |                  |                  |                  |
| : 1,      | Ę,                 | : T              | : 1,             | ::<br>1,         | 근.               | . 1,             | : 1,             | i: 1,            | : 1,             | ): 1,            | <br>              | Ţ.               | i: 1,            | 1: 1,            | 1; 1,            | : 1,             | §: 1,            | <u>:</u> 1,      | 7: 1,            | .;               | ÷                 | »: 1,              | k: 1, | . <u></u>           | ); <b>1</b> ,      | . T:             | · 1,             | . <u>†</u>       | : 1 <b>,</b>     |
| 1, S0040: | S0342: 1, S0134: 1 | H0650: 1, H0255: | H0661: 1, H0663: | H0449: 1, H0125: | S0444: 1, H0675: | H0393: 1, H0370: | H0357: 1, H0333: | H0643: 1, H0574: | F0039: 1, H0706: | H0036: 1, H0390: | \$0346: 1, H0421: | S0049: 1, H0196: | H0251: 1, H0085: | H0562: 1, H0123: | H0047: 1, H0023: | H0014: 1, H0051: | 10071: 1, H0356: | H0239: 1, H0594: | H0188: 1, H0687: | H0290: 1, S0312: | S0214: 1, L0194:  | H0604: 1, H0628: 1 | 7/90E | H0212: 1, S0366: 1, | H0063: 1, H0269: 1 | F0069: 1, L0351: | .0435: 1, T0041: | F0042: 1, S0440: | H0509: 1, S0150: |
| 8: 1, 5   | 2: 1, S            | 0:1,1            | 1: 1, F          | 9: 1, I          | 1: 1, E          | 3: 1, I          | 7: 1, 1          | 3: 1, I          | 3: 1, I          | 6: 1, I          | 5: 1, F           | 7. 1, F          | 1: 1, 1          | 2: 1, 1          | 7: 1, 1          | 4: 1, 1          | 1:1,1            | 9:1,1            | 8: 1, 1          | 0:1,5            | ‡: 1, I           | 4: 1, ]            | 9:1,1 | 2: 1, 5             | 3: 1, 1            | 9: 1, I          | 5: 1, 1          | 2: 1, 5          | 9:1,5            |
| H0158: 1  | S0342              | H065             | H066             | H044             | <b>S044</b>      | H039             | H035             | H064             | T003             | H003             | \$034             | S0049            | H025             | H056             | H004             | H001             | H007             | H023             | H018             | H029             | S021 <sup>4</sup> | H060               | H016  | H021                | H006               | T006             | L043             | T004             | H050             |
|           |                    |                  |                  |                  |                  |                  |                  |                  | ٠                |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |
|           |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |
|           |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |
|           |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  | ,                 |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |
|           |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |
|           |                    |                  | •                |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  | ·                |                  | _                 |                    |       |                     |                    |                  |                  | -                | ,                |
|           |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  | ٠                 |                    |       |                     |                    |                  |                  |                  |                  |
| _         |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  | ····             |                  |                  |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |
| _         |                    |                  |                  |                  |                  | :                | _                |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   | ·                  |       |                     |                    |                  |                  |                  |                  |
|           |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  | ٠                |                  |                  |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |
|           |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |
| _         |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |
|           | ,                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       |                     |                    |                  | ,                |                  |                  |
|           |                    |                  |                  |                  |                  |                  | ٠                |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |       |                     |                    |                  |                  |                  |                  |

|  | 108985,<br>186921,<br>602092   |  |   |
|--|--|--|---|
|  | 11p15  |  |   |
| H0130: 1, H0633: 1,<br>S0210: 1, L0598: 1,<br>L0625: 1, L0649: 1,<br>L0776: 1, L0517: 1,<br>L0732: 1, L0663: 1,<br>H0697: 1, H0693: 1,<br>H0660: 1, S0380: 1,<br>H0660: 1, S0380: 1,<br>H0134: 1, S0406: 1,<br>S0037: 1, L0754: 1,<br>L0752: 1, L0759: 1,<br>L0757: 1, L0759: 1,<br>L0757: 1, L0759: 1,<br>H01665: 1, H0667: 1,<br>H0136: 1, S0196: 1, | L0731: 3, H0632: 1,<br>H0052: 1, H0628: 1,<br>L0766: 1, L0636: 1,<br>L0545: 1, L0543: 1,<br>H0658: 1, L0740: 1,<br>L0750: 1, L0752: 1,<br>S0260: 1 and H0293: 1. | L0755: 3, L0766: 2,<br>L0794: 1, L0759: 1 and<br>H0343: 1. | H0684: 38, H0703: 27, H0685: 23, H0717: 21, |
|  | Arg-1 to Ser-20.   | Val-1 to Asn-6.  |   |
|  | 2452   | 2453   | 2454  |
|  | 114 - 419  | 630 - 409  | 698 - 222                                   |
| ·  | 277  | 278  | 279   |
|  | 996619   | 996804   | 996874                                      |
|  | HSDJH04  | HSOAN18  | нненғ49                                     |

|                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                        | 107741,             | 113900,             | 122720,             | 122720,             | 126340,             | 126391,             | 160900,             | 164731,             | 172400,             |
|-----------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                       |                       |                       |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                        | 19q13.1-            | q13.2               |                     |                     |                     |                     | -                   |                     |                     |
| H0688: 21, H0687: 19, | H0542: 19, H0722: 15, | H0699: 14, H0716: 12, | H0725: 9, H0494: 8, | H0696: 7, H0689: 5, | H0555: 5, H0708: 4, | H0545: 3, H0695: 3, | H0723: 3, H0724: 3, | H0683: 3, H0521: 3, | H0686: 2, H0713: 2, | H0580: 2, H0546: 2, | H0509: 2, H0593: 2, | H0710: 2, H0709: 2, | H0543: 2, H0712: 2, | H0650: 1, H0675: 1, | H0602: 1, H0586: 1, | H0510: 1, H0488: 1, | H0560: 1, S0422: 1, | H0698: 1, H0691: 1, | H0690: 1, H0682: 1, | H0694: 1 and S0424: 1. | L0769: 6, L0747: 5, | H0619: 2, L0761: 2, | L0794: 2, L0803: 2, | L0659: 2, L0809: 2, | L0744: 2, L0745: 2, | H0583: 1, H0483: 1, | H0580: 1, H0592: 1, | H0581: 1, H0052: 1, | H0264: 1, H0561: 1, |
|                       |                       |                       | <u> </u>            |                     | <u>,</u>            | <u> </u>            |                     |                     | <u> </u>            |                     | <del></del>         | <u>jahaq</u>        |                     | <u></u>             |                     |                     |                     |                     |                     |                        | Lys-43 to Tyr-48,   |                     | တ်                  |                     |                     |                     |                     |                     | 1                   |
|                       |                       |                       |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2455                |                     |                     |                     |                     |                     |                     |                     |                     |
|                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                        | 10 - 711            |                     |                     | ٠                   |                     |                     |                     |                     |                     |
|                       |                       | <u></u> .             |                     |                     |                     |                     |                     | ٠.                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                      | 280                 |                     |                     |                     |                     |                     |                     |                     |                     |
|                       |                       | •                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 996903              |                     |                     |                     |                     |                     |                     |                     |                     |
|                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | -                   | -                   |                     |                     |                     |                     |                        | HCHCF36             |                     |                     |                     |                     |                     |                     | -                   | •                   |

| 172400,<br>173850,<br>180901,<br>207750,<br>221770,<br>248600,<br>258501,<br>600918,                               |   |
|--|---|
| L0762: 1, L0766: 1,<br>L0791: 1, L0666: 1,<br>H0547: 1, H0435: 1,<br>H0521: 1, L0751: 1,<br>L0750: 1 and L0780: 1. | L0748: 16, S0007: 7,<br>H0360: 7, H0046: 6,<br>L0803: 5, L0747: 5,<br>L0771: 4, L0794: 4,<br>L0731: 4, H0486: 3,<br>L0666: 3, L0663: 3,<br>L0665: 3, L0439: 3,<br>L0758: 3, H0637: 2,<br>H0261: 2, S0222: 2,<br>H0622: 2, H0169: 2,<br>L0758: 2, H0169: 2,<br>L0754: 2, H0170: 1,<br>S0134: 1, H0650: 1,<br>S0116: 1, S0282: 1,<br>S0418: 1, S0376: 1,<br>H0380: 1, L0622: 1, |
|  | Glu-1 to Thr-9, Asn-17 to Ser-34.  L L L L L L L L L L L L L L L L L L  |
|  | 2456  |
| ·  | 1 - 228   |
|  | 281   |
|  | 997127  |
|  | HAHCK58   |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|
| L0021: 1, H0599: 1, | H0318: 1, S0474: 1, | H0150: 1, H0041: 1, | H0050: 1, S0388: 1, | H0271: 1, S0003: 1, | H0673: 1, L0456: 1, | H0135: 1, H0412: 1, | H0056: 1, H0623: 1, | S0386: 1, S0112: 1, | H0494: 1, S0144: 1, | S0344: 1, H0529: 1, | L0763: 1, L0638: 1, | L0646: 1, L0764: 1, | L0766: 1, L0650: 1, | L0375: 1, L0653: 1, | L0776: 1, L0783: 1, | L0543: 1, L0647: 1, | L0787: 1, L0788: 1, | L0664: 1, L0352: 1, | H0547: 1, H0593: 1, | H0690: 1, H0435: 1, | H0670: 1, H0648: 1, | H0672: 1, H0651: 1, | H0539: 1, H0521: 1, | H0522: 1, S3014: 1, | S0027: 1, S0206: 1, | L0759: 1, S0434: 1, | L0595: 1, H0668: 1, | S0026: 1 and H0293: 1. | S0402: 1, S0360: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                        | Leu-6 to Ser-11.    |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                        | 2457                |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | ,                      | 41 - 385            |
|                     | •                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | - ,                 |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                        | 282                 |
|                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                      | 997165              |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                      | HETIJ06             |

|                        |          |                     |                     |                     |                     | _                   |                      |                     |                      |                 |                  |                  |                  |                  |                |                  |        |        |        | -            |        | <del></del> ,- |                  |             |           |                   |        |           | $\neg$ |
|------------------------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|----------------------|-----------------|------------------|------------------|------------------|------------------|----------------|------------------|--------|--------|--------|--------------|--------|----------------|------------------|-------------|-----------|-------------------|--------|-----------|--------|
| i                      |          |                     |                     |                     |                     |                     |                      |                     |                      |                 |                  |                  |                  |                  |                |                  |        |        |        |              |        |                |                  |             | ,         |                   |        |           |        |
|                        |          |                     |                     |                     | •                   |                     |                      |                     |                      |                 |                  |                  |                  |                  |                |                  |        |        |        |              |        |                |                  |             |           |                   |        |           | _      |
|                        |          |                     |                     |                     |                     |                     |                      |                     |                      |                 |                  |                  |                  |                  |                |                  |        |        |        |              |        |                |                  |             |           |                   |        | j         |        |
|                        |          |                     | :                   |                     |                     |                     |                      |                     |                      |                 |                  |                  |                  |                  |                |                  |        |        |        |              |        |                |                  |             |           | _                 |        |           |        |
| 1 and                  |          | 5,                  | ٠                   | ₹.                  | ₹ŕ                  | κ,                  | ري<br>د              | ູ່ຕໍ                | رې                   | . <del></del> . | 1,               |                  | <del>-</del>     | · +              | , <sub>1</sub> | 1,               | 1,     | 1,     | 1,     | <del>-</del> | 1,     | 1,             | 1,               | 1,          | 1,        | 1,                | 1,     | 1,        | 1,     |
| H0046: 1, H0252: 1 and |          | L0777: 9, L0803: 5, | .0748: 5, L0663: 4, | .0754: 4, L0747: 4, | .0753: 4, L0758: 4, | .0766: 3, H0659: 3  | .0763: 2, L.0519: 2, | .0665: 2, S0126: 2, | .0602: 2, L.0439: 2, | T0002:          | H0686: 1, S0040: | S0116: 1, S0222: | H0575: 1, H0122: | H0004: 1, H0309: | L0163:         | H0028: 1, H0615: | .0770: | L0773: | L0794: | L0805:       | L0657: | L0809:         | .0789: 1, L0666: | T0068:      | l, H0672: | .0744: 1, L.0740: | L0749: | 1, L0752: | .0759: |
| 6: 1, H                | 8: 1.    | 77: 9, ]            | 3:5,'L              | 4: 4, L             | 3: 4, L             | 5:3, H              | 3: 2, L              | 5: 2, S             | 2: 2, L              | .0750: 2, T     | 6: 1, S          | 5: 1, S          | 5: 1, F          | 4: 1, F          | 0:1,L          | 8: 1, F          | 1,1    | 1      | 1,     | <del>_</del> |        |                | 9: 1, L          | .0664: 1, T |           | 4: 1, L           | T,     | 9: 1, L   | [,]    |
| H004                   | H0428: 1 | L077                | 1074                | 1075                | 1075                | 1076                | 1076                 | 9907                | 1060                 | 1075            | H068             | S0116            | H057             | 1000H            | 10040:         | H002             | H0040: | L0764: | L0662: | L0774:       | L0655: | L0526: 1       | 1078             | )<br>F066   | H0670:    | L074              | L0751: | L0779:    | L0731: |
|                        |          | rp-12,              | Glu-57,             | Asn-88,             | Glu-131,            | Asp-153.            | ı                    |                     |                      |                 |                  |                  |                  |                  |                |                  |        |        |        |              |        |                |                  |             |           |                   |        |           |        |
|                        |          | Glu-6 to Trp-12,    | Leu-36 to Glu-57,   | Pro-74 to Asn-88,   | Ser-119 to Glu-131, | Pro-139 to Asp-153. |                      |                     |                      |                 |                  |                  |                  |                  |                |                  |        | •      | •      |              |        |                |                  |             | •         |                   |        |           |        |
|                        |          | 2458                |                     |                     |                     |                     |                      |                     |                      |                 |                  |                  |                  |                  | -              |                  |        |        |        |              |        |                |                  |             |           |                   |        |           |        |
|                        |          | 244 - 759           | :                   |                     |                     |                     |                      |                     |                      |                 |                  |                  |                  |                  |                |                  |        |        |        |              | ,      |                |                  |             |           |                   |        |           |        |
|                        |          | 283                 |                     |                     |                     |                     |                      |                     |                      |                 |                  |                  |                  |                  |                |                  |        |        |        |              |        |                |                  |             |           |                   |        | ٠.        |        |
|                        |          | 997595              |                     |                     |                     |                     |                      |                     |                      |                 |                  |                  |                  |                  |                |                  |        |        |        |              |        |                |                  |             |           |                   |        |           |        |
|                        |          | HAPOE30             |                     |                     |                     | _                   |                      |                     |                      |                 |                  |                  | -                |                  |                |                  |        |        |        |              |        |                |                  |             |           |                   |        |           |        |

|                        |                     |    |                       |                     |                    |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                      |                     |                     |                     |                     | _                   |
|------------------------|---------------------|----|-----------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                        |                     |    |                       |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                      |                     |                     |                     |                     |                     |
| L                      |                     | _  |                       |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                      |                     |                     |                     |                     | _                   |
|                        |                     |    |                       |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                      |                     |                     |                     |                     |                     |
|                        |                     |    |                       |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                      |                     |                     |                     |                     |                     |
| L0591: 1 and S0011: 1. | H0134: 1 and L0756: |    | L0794: 11, L0803: 10, | H0013: 6, H0090: 6, | 0766: 6, L0663: 6, | .0731: 6, H0457: 5, | H0328: 5, L0493: 5, | .0666: 5, L0777: 5, | .0759: 5, L0754: 4, | .0779: 4, H0305: 3, | ,0665: 3, H0144: 3, | H0670: 3, H0696: 3, | .0591: 3, H0657: 2, | 30442: 2, S0360: 2, | .0717: 2, H0600: 2, | H0156: 2, H0590: 2, | H0024: 2, H0615: 2, | .0483: 2, T0042: 2, | 30422: 2, H0529: 2, | 0625: 2, L0805: 2, | 0776: 2, L0655: 2, | 0527: 2, S0374: 2, | H0521: 2, H0436: 2, | .0745: 2, L.0588: 2, | .0581: 2, L0361: 2, | H0542: 2, S0424: 2, | H0624: 1, H0171: 1, | H0686: 1, T0049: 1, | H0650: 1, H0656: 1, |
| 105                    | E,                  | -1 | <u> </u>              | 8                   | 8                  | 1007                | H03                 | 106                 | 107                 | 101                 | <u>1</u> 06         | H06                 | 105                 | S04                 | 1.07                | H01                 | <u>H</u> 00         | 7                   | S04,                | 106                | 120                | 1.05               | H05                 | <u>101</u>           | 105                 | H05                 | 90H                 | 90H                 | H06                 |
|                        |                     |    | Lys-1 to Arg-46.      |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                      |                     |                     |                     |                     |                     |
|                        | 2459                |    | 2460                  |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                      | •                   |                     |                     |                     |                     |
|                        | 229 - 738           | 1  | 1037 -                | 1174                |                    |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                      |                     |                     |                     |                     |                     |
|                        | 284                 |    | 285                   |                     |                    |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    | •                   |                      |                     |                     | •                   | •                   |                     |
|                        | 997862              |    | 997873                |                     |                    |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                      |                     |                     |                     |                     |                     |
|                        | HRGDC33             |    | HMTMB91               |                     |                    |                     |                     |                     |                     |                     | ,                   |                     |                     |                     | <del></del>         |                     |                     | ·                   |                     |                    |                    |                    |                     |                      |                     |                     |                     |                     | ,                   |

|                  |                  |                  |                  |         |           |           |                  |                  |                  |                  |           |                  | ,                |                  |                  |                  | <del></del>      |           |                  |            |                  |         | _         |        |                  |                 |           |           |           |
|------------------|------------------|------------------|------------------|---------|-----------|-----------|------------------|------------------|------------------|------------------|-----------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|------------------|------------|------------------|---------|-----------|--------|------------------|-----------------|-----------|-----------|-----------|
|                  |                  |                  |                  |         |           |           |                  |                  |                  |                  |           |                  |                  |                  |                  | <u>.</u>         |                  |           | <u></u> .        |            |                  |         |           |        |                  |                 |           |           | _         |
|                  |                  |                  |                  |         |           |           |                  |                  |                  |                  |           |                  |                  |                  |                  |                  | r                |           |                  | - Williams |                  |         |           | •      |                  |                 |           |           |           |
| : 1,             | 1,               | T,               | <del>-</del>     | <u></u> |           | . 1,      | · 1,             |                  | : 1,             | : 1,             | :1,       | .1,              | :1,              | :1,              | : 1,             | : 1,             | : 1,             | —<br>—    | .1,              | 1,         | .1,              | : 1,    | .1,       | : 1,   | . <del>.</del> . | : 1,            | : 1,      | . T.      | : 1,      |
| H0341: 1, H0589: | S0418: 1, S0356: | S0358: 1, S0376: | S0408: 1, H0329: | _       | 1, H0455: | 1, H0586: | H0574: 1, H0486: | S0280: 1, L0021: | H0575: 1, H0036: | H0318: 1, H0263: | 1, H0545: | .0157: 1, H0123: | H0015: 1, S0388: | 30051: 1, H0375: | H0271: 1, H0188: | S0003: 1, H0688: | H0644: 1, L0055: | 1, H0038: | H0634: 1, H0551: | 1, S0352:  | H0652: 1, S0208: |         | 1, L0769: |        | 1, L0498:        | 0804: 1, L0650: | 1, L0806: | 1, L0606: | 1, L0659: |
| H0341:           | S0418:           | S0358:           | S0408:           | S0045:  | H0370: 1  | H0602: 1  | H0574:           | S0280:           | H0575:           | H0318:           | T0115: 1  | L0157:           | H0015:           | S0051:           | H0271:           | S0003:           | H0644:           | H0163: 1  | H0634:           | 1.0475:    | H0652:           | 1.0640: | 1.0500:   | 10646: | L0662: 1         | 10804:          | L0784: 1  | 1.0653:   | L0515:    |
|                  |                  |                  |                  |         |           |           |                  | ,                |                  |                  | •         |                  |                  |                  |                  |                  |                  |           |                  |            |                  |         |           |        |                  |                 |           |           |           |
|                  |                  |                  |                  |         |           |           |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                  |           |                  |            |                  |         |           | •      |                  |                 |           |           |           |
|                  |                  | _                | •                |         |           |           |                  |                  | -                | -                |           | · · · · · ·      |                  |                  |                  |                  |                  |           |                  |            |                  |         |           | •      |                  |                 |           |           |           |
|                  | -                |                  |                  |         |           |           | _                |                  |                  |                  |           | _                |                  |                  |                  |                  |                  |           |                  |            |                  |         |           |        |                  |                 |           |           |           |
|                  |                  | <del></del>      |                  |         |           |           |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                  |           |                  |            |                  |         |           |        |                  |                 |           |           |           |
|                  |                  |                  |                  |         |           |           |                  |                  |                  |                  |           |                  |                  | •                |                  |                  |                  |           | -                |            | <u> </u>         |         |           |        |                  |                 |           |           |           |
|                  |                  |                  |                  |         |           |           |                  |                  |                  | _                |           |                  |                  |                  |                  |                  |                  |           |                  |            |                  |         |           |        |                  |                 |           |           |           |
|                  |                  |                  |                  |         |           | •         |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |                  |           |                  |            |                  |         |           |        |                  |                 |           |           |           |
| L                |                  |                  |                  |         |           |           | _                |                  |                  |                  |           |                  |                  |                  |                  |                  | ٠                |           |                  |            |                  |         |           |        |                  |                 |           |           |           |

|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                        |                     |                     |                                      |                                      |                     |                     |                     |                     | •                   |                     |                        | 165500,<br>600700 |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|--------------------------------------|--------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-------------------|
| _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                                      |                                      |                     |                     |                     |                     |                     |                     | -                      | <u>8</u> 6        |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                        |                     |                     |                                      |                                      |                     |                     |                     | <u> </u>            |                     |                     |                        | 3q28              |
| L0526: 1, L0519: 1, | L0788: 1, L0790: 1, | L0791: 1, L0664: 1, | S0296: 1, H0520: 1, | H0547: 1, H0519: 1, | S0126: 1, H0682: 1, | H0659: 1, H0658: 1, | H0660: 1, H0672: 1, | S0380: 1, H0518: 1, | H0525: 1, S0404: 1, | S0406: 1, H0479: 1, | S0432: 1, L0744: 1, | L0750: 1, L0780: 1, | L0753: 1, L0604: 1, | S0106: 1, S0242: 1, | S0196: 1, H0543: 1, | H0423: 1 and S0452: 1. | L0809: 5, L0439: 4, | L0591: 2, S6024: 1, | H0341: 1, H0346: 1,                  | S0356: 1, S0358: 1,                  | S0360: 1, L0040: 1, | H0457: 1, H0494: 1, | L0518: 1, L0666: 1, | L0665: 1, S0330: 1, | H0521: 1, L0752: 1, | L0731: 1, L0758: 1, | L0590: 1 and L0599: 1. |                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Ser-62 to Thr-67,   | Val-74 to Cys-79,   | Thr-118 to Gln-132, H0341: 1, H0346: | Glu-204 to Asp-219, S0356: 1, S0358: | Pro-225 to Arg-235. |                     |                     |                     |                     |                     |                        | Pro-24 to His-31. |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2461                |                     |                                      |                                      |                     |                     |                     |                     |                     |                     |                        | 2462              |
|                     |                     |                     | -                   |                     |                     |                     |                     | <del></del> ,       |                     |                     |                     |                     |                     |                     |                     |                        | 238 - 957           |                     |                                      | -                                    |                     |                     |                     | •                   |                     |                     |                        | . 1211 -<br>1360  |
|                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 286                 |                     |                                      |                                      |                     |                     |                     | ·                   |                     |                     |                        | 287               |
|                     |                     |                     |                     | 7                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 998059              |                     |                                      |                                      |                     |                     |                     |                     |                     |                     |                        | 998517            |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HFAAD07             |                     |                                      |                                      |                     |                     |                     |                     |                     |                     |                        | HE8TG67           |

|                        | • |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |
|------------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                        |   |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0748: 9, L0769: 7,    | L0776: 6, L0747: 6,                     | L0768: 5, L0775: 5, | L0750: 5, S0358: 4, | S0144: 4, L0763: 4, | L0731: 4, L0757: 4, | L0588: 4, H0657: 3, | S0046: 3, H0545: 3, | S0438: 3, S0422: 3, | L0770: 3, L0517: 3, | S0406: 3, L0755: 3, | T0049: 2, H0341: 2, | S0408: 2, S0410: 2, | H0580: 2, S0222: 2, | H0586: 2, L0622: 2, | T0109: 2, H0083: 2, | H0551: 2, H0100: 2, | H0396: 2, S0440: 2, | S0210: 2, L0520: 2, | L0764: 2, L0767: 2, | L5574: 2, L0540: 2, | L0518: 2, L0809: 2, | S0330: 2, S0380: 2, | L0758: 2, S0031: 2, | H0543: 2, H0170: 1, | H0685: 1, H0716: 1, | H0295: 1, S0212: 1, | S0110: 1, S0282: 1, | S0420: 1, S0444: 1, | H0351: 1, H0411: 1, |
| 2463 Glu-14 to Lys-25. | •                                       |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 2463                   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |
| 36 - 380               |   |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 288                    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 998533                 | -                                       |                     |                     |                     |                     |                     |                     |                     |                     | •                   | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HACNC39                |   |                     |                     |                     |                     |                     |                     |                     |                     | <u>·</u>            |                     |                     |                     |                     |                     |                     |                     | . •                 |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |

| S0278: 1, H0643: 1,<br>L0623: 1, H0427: 1,<br>H0575: 1, H0004: 1,<br>T0048: 1, T0001: 1,<br>H0196: 1, H0009: 1,<br>H0123: 1, T0003: 1,<br>S0388: 1, S0051: 1,<br>H0124: 1, H0708: 1,<br>H0124: 1, H0708: 1,<br>H0163: 1, H0641: 1,<br>H0625: 1, L0665: 1,<br>H0633: 1, H0743: 1,<br>L076: 1, L0521: 1,<br>L076: 1, L0521: 1,<br>L0774: 1, L0523: 1,<br>L0774: 1, L0563: 1,<br>H0559: 1, L0663: 1,<br>H0566: 1, H0672: 1,<br>H0566: 1, H0672: 1,<br>H0566: 1, H0672: 1,<br>H0566: 1, S0152: 1,<br>S0027: 1, S0032: 1,   | L0751: 1, L0752: 1,<br>S0308: 1, L0603: 1,<br>H0136: 1, H0423: 1 and |
|--|--|
| H0643: 1,<br>H0427: 1,<br>H0004: 1,<br>T0001: 1,<br>H0009: 1,<br>H0628: 1,<br>H0628: 1,<br>H0708: 1,<br>H0708: 1,<br>H0743: 1,<br>L056: 1,<br>L052: 1,<br>L056: 1,<br>L056: 1,<br>L056: 1,<br>H0690: 1,<br>H0690: 1,<br>H0690: 1,<br>H0690: 1,<br>H0690: 1,<br>H0672: 1,<br>S0152: 1,<br>S0032: 1,   |  |
| H0643: 1,<br>H0427: 1,<br>H0404: 1,<br>T0001: 1,<br>H0009: 1,<br>H0628: 1,<br>H0628: 1,<br>H0648: 1,<br>H0641: 1,<br>H0743: 1,<br>L0561: 1,<br>L0561: 1,<br>L0563: 1,<br>L0663: 1,<br>L0663: 1,<br>H0690: 1,<br>H0690: 1,<br>H0690: 1,<br>S0152: 1,<br>S0152: 1,<br>S0162: 1,  |  |
| H0643: 1,<br>H0427: 1,<br>H0004: 1,<br>T0001: 1,<br>H0009: 1,<br>H0628: 1,<br>H0628: 1,<br>H0708: 1,<br>H0708: 1,<br>H0743: 1,<br>L0561: 1,<br>L0561: 1,<br>L0561: 1,<br>L0563: 1,<br>L0663: 1,<br>L0663: 1,<br>H0690: 1,<br>H0690: 1,<br>H0672: 1,<br>S0032: 1,   |  |
| H0643: 1,<br>H0427: 1,<br>H0004: 1,<br>H0004: 1,<br>H0009: 1,<br>H0628: 1,<br>H0628: 1,<br>H0648: 1,<br>H0494: 1,<br>H0494: 1,<br>H0708: 1,<br>H0708: 1,<br>H0708: 1,<br>H0708: 1,<br>H071: 1,<br>L0561: 1,<br>L0561: 1,<br>L0561: 1,<br>L0563: 1,<br>L0663: 1,<br>H0690: 1,<br>H0690: 1,<br>H0690: 1,<br>S0152: 1,<br>S0152: 1,<br>S0152: 1,  |  |
| H0643: 1, H0427: 1, H0427: 1, H0004: 1, H0004: 1, H0009:   |  |
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| 00578: 1, F<br>10575: 1, F<br>10575: 1, F<br>10196: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040: 1, F<br>101040 | .0751: 1, L0752:<br>30308: 1, L0603:<br>10136: 1, H0423:             |
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|           | 109560,<br>205900,<br>600652,<br>600757  |  |
|           | 19q13  |  |
| S0396: 1. | H0494: 4, L0794: 3,<br>H0670: 2, L0751: 2,<br>H0661: 1, H0602: 1,<br>H0587: 1, H0014: 1,<br>H0688: 1, L0376: 1,<br>L0806: 1, L0657: 1 and<br>L4501: 1.   | H0521: 22, L0601: 8,<br>H0266: 7, S0126: 7,<br>L0748: 6, H0556: 4,<br>S0356: 4, S0358: 4,<br>H0052: 4, L0771: 4,<br>L0655: 4, L0777: 4,<br>H0599: 3, H0581: 3,<br>H0046: 3, H0615: 3,<br>H0048: 3, L0766: 3,<br>L064: 3, L0766: 3,<br>L0758: 3, L0759: 3,<br>H0547: 3, S3014: 3,<br>L0758: 3, H0542: 3,<br>H0423: 3, H0542: 3,<br>H0423: 3, H0542: 2,<br>H0580: 2, S0360: 2,<br>H0580: 2, S0360: 2,<br>S0132: 2, H0393: 2, |
|           | Thr-10 to Ala-18, Pro-56 to His-64, Pro-66 to Leu-74, Ser-81 to Asp-86, Glu-93 to Trp-101, Leu-143 to Gln-151, Pro-162 to Asp-224, Thr-216 to Asp-224, Pro-235 to Gln-246, Lys-258 to Gly-268, Trp-283 to Gly-268, |  |
|           | 2464   | 2465   |
|           | 45 - 989   | 2 - 664  |
|           | 289  | 290  |
|           | 998901   | 506866   |
|           | нсоор78  | HCGMA67  |

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| ١.                  | ·                   | ລ໌                  | ~ໂ                  | ~į                  | •                   | _ 5                 | ~ໂ                  | _\$                 |                     | ٠.                  | ٠,         |                    | ·                   | •                  | L,               |                  | l,               | 1,                 |                  | •                  | <u>.</u> .       |                  | _,               | 1,               | 1,               |                  |           | <del>, ,</del> ,   | 1,              |
| 86: 2               | 013:                | 575: 2              | 4.3                 | 523: 2              | 4:2                 | 99:2                | 14:2                | 522: 2              | 27:2                | 740:2               | L0780: 2,  | 76: 2              | 302: 1              | 46.1               | 920:             | 282: 1           | 663:             | 638:               | 120: 1           | 76: 1              | 468: 1           | 519: 1           | 415:             | 497:             | .690             | 421: ]           | L0040:    | 620:               | 051:            |
| HO                  | , HO                | , HO                | , HO                | , HO                | , S03               | , L08               | , H0]               | , H05               | , soo               | , LO7               | , LO7      | , S02              | I, T0(              | 1, SO(             | I, H0            | 1, S02           | 1, H0            | 1, H0              | , S04            | , S03              | 1, SQ            | , H0             | l, H0            | 1, H0            | 1, H0            | l, HQ            | 1, LO     | 1, H0              | 1, H0           |
| S0222: 2. H0586: 2. | H0486: 2, H0013: 2, | H0108: 2, H0575: 2, | 10050: 2, H0644: 2, | H0169: 2, H0623: 2, | S0142: 2, S0344: 2, | .0659: 2, L0809: 2, | .0666: 2, H0144: 2, | S0374: 2, H0522: 2, | 53012: 2, S0027: 2, | .0743: 2, L0740: 2, | 0754: 2, ] | 0594: 2, S0276: 2, | H0170: 1, T0002: 1, | H0222: 1, S0040: 1 | H0713: 1, H0650: | H0657: 1, S0282: | H0255: 1, H0663: | H0459: 1, H0638: 1 | S0418: 1, S0420: | S0354: 1, S0376: 1 | H0339: 1, S0468: | S0140: 1, H0619: | .0717: 1, H0415: | 10438: 1, H0497: | 10250: 1, H0069: | S0346: 1, H0421: | H0194: 1, | H0178: 1, H0620: 1 | H0014: 1, H0051 |
| 802                 | HO                  | H0                  | )H                  | H                   | S0                  | <u>3</u>            | <u>3</u>            | S03                 | S3(                 | 0                   | 5          | Š                  | H<br>H              | H0                 | H                | Ř                | Œ.               | 兒                  | <u>8</u> 0       | 80                 | <u>H</u>         | S0.              | <u>9</u>         | H<br>H           | HO               | 80               | 丑         | <u>E.</u>          | 呈               |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |            |                    |                     |                    |                  |                  |                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |           |                    |                 |
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| $\frac{1}{1}$ ,       | 1,               | 1,               | <del>,</del>     | 1,               | 1,       | ļ,               | 1,               | l,               | H,       | 1,                  | i                | 1,               |                  | 1,               | 1,               | 1,               | 1,               | Ή,              | 1,               | 1,               | 1,               | ۲,               | 1,               | 1,               | <del></del>        | 1,               | 1,               | T,               |
| 83:<br>271:           | 906              | 331:             | 573:             | :99              | 135:     | 387:             | .79              | 487:             | 413:     | 100:                | <b>194</b> :     | 541:             | 02:              | 770:             | 72:              | <u>%</u>         | 63:              | :00             | 193:             | .88:             | 591:             | 435:             | 658:             | 78:              | 90                 | )28:             | 55:              | 157:             |
| , H0083:<br>I, H0271: | J07              | )HO              | H06              | S03              | H0       | )H               | , T0             | HQ               | HQH.     | HO                  | H0               | , HO             | 200              | 100              | 103              | 5                | L03              | 108             | 12               | 10               | HO               | H,               | , HO             | S03              | <b>S04</b>         | , SOC            | 150              | 507              |
|                       | H0622: 1, T0006: | H0424: 1, H0031: | .0142: 1, H0673: | H0124: 1, S0366: | 6: 1,    | H0591: 1, H0087: | H0551: 1, T0067: | H0264: 1, H0487: | 8: 1     | H0056: 1, H0100: 1, | .0564: 1, H0494: | H0366: 1, H0641: | S0422: 1, S0002: | H0529: 1, L0770: | .0637: 1, L0772: | .0646: 1, L0764: | .0662: 1, L0363: | 0774: 1, L0806: | .0652: 1, L0493: | .0382: 1, L0788: | .0663: 1, H0691: | H0689: 1, H0435: | H0659: 1, H0658: | S0330: 1, S0378: | S0152: 1, S0406: 1 | H0555: 1, S0028: | .0779: 1, L0755: | .0731: 1, L0757: |
| S0051: 1<br>H0354:    | 1062             | 1042             | 014              | 1012             | 1031     | <b>105</b> 6     | 1055             | 1026             | 1026     | 1005                | 056              | <b>H036</b>      | 3042             | 1052             | .063             | 200              | 990              | 770             | 2065             | .038             | 990              | <b>390F</b>      | 1065             | 3033             | 3015               | <b>H055</b>      | 770              | 073              |
| SI                    | <u> </u>         |                  | <u></u>          | <u>.</u>         | <u> </u> | <u> </u>         |                  |                  | <u> </u> | <u> </u>            | <u> </u>         | <u>, 141</u>     | <u>V</u>         | إسلمز            |                  | <u> </u>         | _                | <u>)1</u>       |                  | <del></del>      | <u> </u>         | <u> </u>         |                  | <u> </u>         | <u>(V)</u>         | <u>.   </u> .    |                  | _                |
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|         |        |     |            |      |   | L0605: 1, L0581: 1,<br>L0595: 1, L0603: 1,<br>H0665: 1, S0192: 1,<br>H0543: 1 and H0422: 1.   |          |  |
|---------|--------|-----|------------|------|---|---|----------|--|
| HSKHK19 | 896866 | 291 | 2 - 673    | 2466 | Ala-1 to Arg-26,<br>Thr-32 to Gln-37.   | L0769: 7, L0751: 6,<br>L0666: 4, L0749: 3,<br>H0030: 2, S0002: 2,<br>L0805: 2, L0653: 2,<br>H0657: 1, H0675: 1,<br>S0007: 1, L0717: 1,<br>H0635: 1, L0717: 1,<br>H0638: 1, L0721: 1,<br>L0772: 1, L0764: 1,<br>L0772: 1, L0764: 1,<br>L0808: 1, L0648: 1,<br>L0806: 1, L0657: 1,<br>H0658: 1, S3014: 1,<br>L0747: 1, L0759: 1,<br>L0780: 1, L0759: 1,<br>L0780: 1, L0759: 1,<br>L0780: 1, L0759: 1, | 7q35-q36 | 118425,<br>118425,<br>118425,<br>142335,<br>152427,<br>163729,<br>176450,<br>190605,<br>276000,<br>600510,<br>600725 |
| HAGGR59 | 999124 | 292 | 30 - 596   | 2467 | Asp-20 to Ile-37,<br>Arg-63 to Met-71,<br>Gly-80 to Gly-95,<br>Lys-98 to Thr-162. | H0556: 1, H0650: 1,<br>S0001: 1, S0376: 1,<br>S0346: 1, H0328: 1,<br>L0800: 1, L0649: 1,<br>H0689: 1, H0660: 1 and<br>H0445: 1.   |          |  |
| HOPKS83 | 999148 | 293 | 419 - 1894 | 2468 | Pro-72 to Tyr-80,<br>Pro-98 to Ser-108,   | S0278: 22, L0439: 20,<br>L0665: 16, L0438: 15,  |          |  |

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|   |                        | <u></u>                |  |                        |                        |   |  |                     |                     |                     |                     | •                   | -,                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u></u>             | <del>-</del> -      |
| 748: 15, L0747: 15,<br>521: 11, L0743: 10.  | L0759: 10, S0144: 9,   | L0666: 9, L0659: 8,    | 741: 8, S0049: 7,                      | S0002: 7, H0547: 7,    | S0126: 7, S0222: 6,    | 0052: 6, H0457: 6,                      | S0036: 6, H0539: 6,                            | L0731: 6, L0757: 6, | H0575: 5, H0012: 5, | H0100: 5, L0649: 5, | .0742: 5, L0751: 5, | S0046: 4, H0333: 4, | H0581: 4, H0188: 4, | 10424: 4, L0770: 4, | .0764: 4, L0662: 4, | 10555: 4, L0758: 4, | .0601: 4, H0295: 3, | 10549: 3, S0290: 3, | H0618: 3, H0086: 3, | H0620: 3, H0024: 3, | H0551: 3, L0526: 3, | ,0663: 3, H0670: 3, | H0672: 3, L0755: 3, | H0255: 2, S0418: 2, | H0580: 2, H0393: 2, | H0351: 2, H0550: 2, | H0253: 2, H0545: 2, | H0123: 2, H0290: 2, |
| Thr-132 to Gly-146, L0748: 15, L0747: 15, Pro-170 to Ala-177, H0521: 11, L0743: 10. | Ser-265 to Pro-280, LO | Pro-303 to Asp-309, L0 | Asp-349 to Ala-354, L0741: 8, S0049: 7 | Arg-387 to Ser-393, S0 | Asn-434 to Tyr-439, S0 | Gln-452 to Gly-457, H0052: 6, H0457: 6, | Asp-469 to Val-485. S0                         | <u>. 1</u>          | H                   | H                   | <u>21</u>           | <u>S</u>            | )H                  | )H                  | 97                  | H                   | <u>01</u>           | H                   | H                   | H                   | H                   | <u>21</u>           | )H                  | H                   | H                   | )H                  | <u>H</u>            | H                   |
|   | :                      |                        |  |                        |                        |   |  |                     |                     | ,                   |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| L                   |                     |   |                     |                     |                     | -            |              |                     |                     |                     |                     |                     |                      |                      |                     |             |                     |                    |                     |             |                     |                    |                    |                  |                  |                    | - <u>·</u>  |                  |              |
| ,                   |                     |   |                     |                     |                     |              |              |                     |                     |                     |                     |                     |                      |                      |                     |             |                     |                    |                     |             |                     |                    |                    |                  |                  |                    |             |                  |              |
| 622: 2,             | 617: 2,             | )412: 2,                                      | 351: 2,             | 426: 2,             | 637: 2,             | L0773: 2,    | .0768: 2,    | 775: 2,             | 352: 2,             | )519: 2,            | )651: 2,            | 028: 2,             | 740: 2,              | 750: 2,              | 780: 2,             | 260: 2,     | 667: 2,             | )685: 1,           | 180: 1,             | 254: 1,     | 376: 1,             | 408: 1,            | 300: 1,            | )261: 1,         | 3392: 1,         | )586: 1,           | H0574: 1,   | )486: 1,         | , H0427: 1,  |
| H0039: 2, H0622: 2, | <b>3553: 2, H</b> C | H0135: 2, H0412: 2,                           | S0038: 2, L0351: 2, | H0494: 2, S0426: 2, | .0769: 2, L0637: 2, | .0646: 2, L0 | .0648: 2, L0 | .0774: 2, L0775: 2, | .0651: 2, L0352: 2, | H0520: 2, H0519: 2, | H0435: 2, H0651: 2, | 10696: 2, S0028: 2, | .0744: 2, L.0740: 2, | .0749: 2, L.0750: 2, | .0779: 2, L0780: 2, | 3753: 2, S0 | .0361: 2, H0667: 2, | H0170: 1, H0685: 1 | 30040: 1, S0180: 1, | )212: 1, HC | S0354: 1, S0376: 1, | H0676: 1, S0408: 1 | S0007: 1, S0300: 1 | 10437: 1, H0261: | H0441: 1, H0392: | 10455: 1, H0586: 1 | H0587: 1, H | H0559: 1, H0486: | .0586: 1, H( |
| H_<br> <br>         | Ħ                   | Ĭ   | SC                  | Ħ                   | <u> </u>            | <u> </u>     | ĭ            | ĭ                   | ĭ                   | Ī                   | Ĭ                   | Ï                   | <u> </u>             | ĭ                    | <u> </u>            | ĭ           | <u> </u>            | İ                  | <u> </u>            | <u>X</u>    | <u>X</u>            | 耳                  | <u>x</u>           | 王                | Ξ                | H                  | 田           | Ħ                | 크            |
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|                     |                     | <u>:                                     </u> |                     |                     |                     |              |              |                     |                     |                     |                     |                     |                      |                      |                     |             |                     |                    | •                   |             |                     |                    |                    |                  |                  |                    |             |                  |              |
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|                     |                     |   |                     | ٠                   |                     |              |              | ٠                   |                     |                     |                     |                     |                      |                      |                     |             |                     |                    |                     |             |                     |                    |                    |                  |                  |                    |             |                  | ı            |
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|                     |                     |   |                     |                     |                     |              |              |                     |                     |                     |                     | _                   |                      |                      |                     | <u> </u>    |                     |                    |                     |             |                     |                    |                    |                  |                  |                    |             |                  | ·            |

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|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           | -                |                  |                  |          |            |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  | _                |                  |          |            |                  |             |                  |                  |           |                  |          | _         |          |             |       |                    |   | •                |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  | •         |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  | ,        |            | ٠                |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            | ÷   | •                |                  |                  |                  | ŗ         | •                |           | _'_              | •                | •                |          | _ <u>_</u> |                  |             |                  | ئن               | •         | •                | •        | •         | •        | •           |       |                    | •   |                  |                    | 1,               |
| 99: 1      | :<br>:::::::::::::::::::::::::::::::::::: | 51:1             | 27: ]            | 81: ]            | 14: ]            | 51: 1     | 10:1             | .99       |                  | 88: 1            | 83: 1            | 24:      | 63:        | 77: ]            | 33:         | .13:             | 02:              | 10:1      | 20:1             | L0363: 1 | 75: 1     | 05: 1    | 58: 1       | 83: 1 | 89: 1              | 36: 1   | 89: 1            | .28:               | :22:             |
| , H0599:   | COH                                       | H02              | H03              | H00              | H00              | 1, H0051: | T00              | H0266:    | H02              | <b>H06</b>       | 72               | , H0124: | , Н0163:   | H00              | H04         | H04              | H01              | 1, S0210: | 1.05             |          |           | L0805:   | L05         | 107   | 107                | .0664: 1, S0006:                              | .0565: 1, H0689: | HO                 | H05              |
| 2.1        | .; T,                                     | ÷.<br>⊢,         | 7. 1,            | 6: 1,            | 0: 1,            | 3: 1,     | 1:1,             | 4: 1,     | 7: 1,            | 0: 1,            | 1,               | 5: 1,    | 8: 1,      | 7: 1,            | 4: 1,       | 8: 1,            | 9.1,             | 2: 1,     | 9: 1,            | I: 1,    | .0766: 1, | 8: 1,    | .0656: 1, I | 6: 1, | 7: 1,              | 4: 1,   | 5: 1,            | 4: 1,              | 0: 1,            |
| S0280: 1   | .0022: 1, H0590:                          | S0324: 1, H0251: | H0597: 1, H0327: | H0546: 1, H0081: | H0050: 1, H0014: | .0163: 1  | S0051: 1, T0010: | H0594: 1, | H0292: 1, H0292: | S0250: 1, H0688: | H0428: 1, L0483: | H0405:   | H0068:     | HO087: 1, H0077: | <b>H026</b> | H0268: 1, H0413: | H0059: 1, H0102: | S0142: 1  | H0529: 1, L0520: | .0771: 1 | 2076      | .0378: 1 | 2065        | .063  | L0647: 1, L0789: 1 | 990   | .056             | H0684: 1, H0658: 1 | H0660: 1, H0522: |
| <i>S</i> • | <u> </u>                                  | <i>)</i>         | <u> </u>         | <u>, 111</u>     |                  | <u> </u>  |                  | <u> </u>  | <u> </u>         | ری               |                  | <u> </u> |            | <u> </u>         | <u> </u>    | <u> </u>         | <u> </u>         | <u> </u>  |                  |          | <u>—</u>  |          | Η.          |       |                    | <u>. —                                   </u> |                  | <u> —</u>          |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           | •                |           |                  |                  |                  |          |            |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  | •                |           |                  |          |           |          |             |       |                    | *   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           | •                |           |                  |                  |                  |          |            |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  | _                |                  |           |                  | •         |                  |                  |                  |          |            | •                |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  |           | ·                |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  |           | •                |          |           |          |             |       |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  | -                |          |            |                  |             |                  |                  |           |                  |          |           |          |             | -     |                    |   |                  |                    |                  |
|            |   |                  |                  |                  |                  |           |                  |           |                  |                  |                  |          |            |                  |             |                  |                  | •         |                  |          |           |          |             |       |                    |   |                  |                    |                  |
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|            |   |                  |                  |                  |                  |           |                  |           |                  |                  | _                |          | <u> </u>   |                  |             |                  |                  |           |                  |          |           |          |             |       |                    |   |                  |                    |                  |

|   |   | 313700,<br>313700,<br>313700,<br>313700,<br>313700  |
|---|---|---|
|   |   | Xq11  |
| S0390: 1, S3014: 1,<br>L0754: 1, L0752: 1,<br>H0445: 1, H0668: 1,<br>H0653: 1, H0665: 1,<br>S0276: 1, H0542: 1,<br>S0458: 1 and H0352: 1. | H0441: 3, H0672: 2,<br>H0555: 2, H0208: 1,<br>S6016: 1, S0222: 1,<br>H0586: 1, H0013: 1,<br>S0049: 1, H0052: 1,<br>H0545: 1, H0046: 1,<br>S0051: 1, T0023: 1,<br>H0617: 1, H0264: 1,<br>H0647: 1, L0438: 1,<br>L0751: 1, L0756: 1 and   | H0052: 45, H0384: 21, Xq11<br>L0748: 20, S0222: 14,<br>S0010: 9, H0441: 6,<br>S0049: 6, L0456: 6,<br>S0346: 5, L0769: 5,<br>S6028: 4, H0428: 4,<br>L0770: 4, L0638: 4,<br>L0738: 4, H0659: 4,<br>L0750: 4, L0753: 4,<br>H0619: 3, S0300: 3,<br>T0010: 3, S0036: 3,<br>H0624: 2, H0717: 2,<br>S6024: 2, H0717: 2,                |
|   | Lys-117 to Pro-123, H0441: 3, H0672: 3<br>Asp-132 to Lys-137, H0555: 2, H0208: 1, Ala-153 to Met-158, S6016: 1, S0222: 1, Ser-166 to Asp-172, H0586: 1, H0013: 1, Lys-184 to Tyr-190, S0049: 1, H0052: 1, Glu-199 to Lys-205. H0545: 1, H0046: 1, S0051: 1, T0023: 1, H0617: 1, H0264: 1, H0647: 1, L0438: 1, H0561: 1, L0756: 1, H0566: 1. | Pro-1 to Pro-6,  Thr-134 to Gln-140, L0748: 20, S0222: 14,  Tyr-142 to Arg-150, S0010: 9, H0441: 6, S0049: 6, L0456: 6, S0346: 5, L0769: 5, S6028: 4, H0428: 4, L0770: 4, L0638: 4, L0770: 4, L0638: 4, L0770: 4, L0753: 4, L0750: 4, L0753: 4, H0619: 3, S0300: 3, H0619: 3, S0036: 3, H0624: 2, H0717: 2, S6024: 2, H0717: 2, |
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|   | 999157  | 999243  |
|   | HE8CY70   | HPCT153   |

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| H0036: 2, H0051: 2, | S0388: 2, S0051: 2, | H0071: 2, H0083: 2, | F0006: 2, L0455: 2, | L0598: 2, L0796: 2, | L5575: 2, L0659: 2, | L0665: 2, H0144: 2, | H0547: 2, L0743: 2, | L0439: 2, L0747: 2, | L0749: 2, L0731: 2, | L0592: 2, L0604: 2, | H0171: 1, S0282: 1, | S0029: 1, S0400: 1, | S0360: 1, S0007: 1, | S6026: 1, H0261: 1, | H0431: 1, H0455: 1, | H0438: 1, H0013: 1, | S0280: 1, H0575: 1, | H0434: 1, H0194: 1, | L0040: 1, H0327: 1, | H0150: 1, H0178: 1, | H0569: 1, H0123: 1, | H0012: 1, S0050: 1, | H0015: 1, H0107: 1, | H0375: 1, H0615: 1, | H0424: 1; H0090: 1, | H0412: 1, H0059: 1, | T0069: 1, H0100: 1, | T0041: 1, T0042: 1, | L0475: 1, L0637: 1, |
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| L0768: 1, L0803: 1,<br>L0806: 1, L0776: 1,<br>L0636: 1, L0783: 1,<br>L0789: 1, L0663: 1,<br>H0520: 1, H0660: 1,<br>H0666: 1, S0378: 1,<br>L0741: 1, L0756: 1,<br>L0777: 1, L0759: 1,<br>L0599: 1, L0366: 1,<br>S0384: 1 and S0446: 1. | H0341: 2, H0013: 2,<br>L0471: 2, H0266: 2,<br>H0144: 2, L0591: 2,<br>S0011: 2, H0624: 1,<br>H0657: 1, H0151: 1,<br>H0083: 1, H0328: 1,<br>H0316: 1, H0591: 1,<br>H0561: 1, S0210: 1,<br>H0561: 1, S0210: 1,<br>L0748: 1, L0749: 1,<br>S0026: 1, H0542: 1 and<br>H0543: 1.  | H0042: 1, L0769: 1 and H0659: 1. | L0761: 3, H0740: 2,<br>L0803: 2, L0718: 2,<br>H0624: 1, S0418: 1,<br>H0208: 1, H0013: 1,<br>H0427: 1, H0544: 1,   |
|   | Glu-47 to Phe-69, H0341: 2, H0013<br>Lys-76 to Lys-82, L0471: 2, H0266: Gly-87 to Ser-98, H0144: 2, L0591: Glu-107 to Asp-117, S0011: 2, H0624: Leu-171 to Val-180. H0657: 1, H0151: H0316: 1, H0328: H0316: 1, H0412: H0561: 1, S0210: H0561: 1, S0210: H0561: 1, S0210: H0561: 1, S0152: L0748: 1, L0749: S0026: 1, H0542: H0543: 1. | Val-13 to Gln-26.                | Glu-1 to Gly-12, L0761: 3, H0740<br>Lys-32 to Arg-37, L0803: 2, L0718: 3<br>Asn-45 to Ser-58, H0624: 1, S0418:<br>Asp-82 to Gln-97, H0208: 1, H0013: Gly-136 to Gln-142, H0427: 1, H0544: |
|   | 2471   | 2472                             | 2473  |
|   | 65 - 1582  | 2 - 115                          | 14 - 715  |
|   | 296  | 297                              | 298   |
|   | 999313   | 8 <i>LL</i> 666                  | 808666  |
|   | HOPKN50  | HAPAI17                          | HHAUV59   |

| _                     |                     |                        | Т         |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|-----------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                       |                     |                        |           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |
|                       |                     |                        | .,        |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |
| H0622: 1, L0769: 1,   | L0789: 1, H0547: 1, | H0519: 1, L0750: 1 and | S0434: 1. | L0803: 6, L0731: 6, | L0596: 6, L0665: 5, | H0591: 3, L0794: 3, | L0804: 3, L0748: 3, | L0777: 3, L0717: 2, | H0586: 2, L0471: 2, | H0622: 2, H0641: 2, | L0771: 2, L0662: 2, | L0766: 2, L0649: 2, | L0664: 2, H0682: 2, | H0670: 2, H0539: 2, | H0518: 2, L0758: 2, | L0759: 2, H0445: 2, | S0242: 2, H0422: 2, | H0171: 1, H0556: 1, | H0657: 1, H0656: 1, | H0341: 1, S0282: 1, | S0354: 1, S0360: 1, | H0574: 1, H0427: 1, | H0575: 1, H0057: 1, | H0014: 1, H0551: 1, | H0646: 1, H0529: 1, | L0763: 1, L0761: 1, | L0764: 1, L5574: 1, | L0775: 1, L0805: 1, | L0776: 1, L0657: 1, |
| Pro-176 to Pro-199, [ |                     |                        |           |                     | Glu-47 to Leu-57,   | Glu-144 to Pro-151, |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                       |                     |                        |           | 2474                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                       |                     |                        | į         | 1 - 747             |                     |                     |                     | <del></del> -       |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     | ,                   |
|                       |                     |                        |           | 299                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ,                     |                     |                        |           | 1000315             |                     | -                   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                       |                     |                        |           | HTXLL31             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   | •                   |                     |

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| L0659: 1, L0789: 1,<br>L0666: 1, H0144: 1,<br>H0435: 1, H0658: 1,<br>S0328: 1, S0330: 1,<br>H0522: 1, S0037: 1,<br>L0747: 1, L0755: 1,<br>H0707: 1 and H0506: 1. | H0615: 5, L0766: 4,<br>H0272: 1, H0560: 1,<br>H0521: 1 and H0677: 1. | S0360: 2, H0266: 2,<br>S0330: 2, L0748: 2,<br>H0556: 1, S0442: 1,<br>L0471: 1, H0024: 1,<br>H0634: 1, H0494: 1,<br>H0560: 1, L0800: 1,<br>L0803: 1, H0435: 1,<br>H0651: 1, H0521: 1,<br>H0522: 1, S0406: 1, | AR089: 6, AR060: 5,<br>AR033: 4, AR104: 4,<br>AR096: 4, AR039: 3,<br>AR052: 3, AR053: 3,<br>AR061: 2, AR055: 1<br>S0002: 4, S0206: 4,<br>L0748: 2, L0740: 2,<br>L0777: 2, S0212: 1,<br>H0661: 1, S0278: 1,<br>H0661: 1, H0123: 1, |
| 1  |  | ·   | Thr-40 to Arg-46,<br>Leu-59 to Ser-68,<br>Leu-236 to Thr-241,<br>Asp-278 to His-284.  |
|  | 2475   | 2476  | 2477  |
|  | 2 - 499  | 725 - 1024  | 3 - 854   |
|  | 300  | 301   | 302   |
|  | 1000339  | 1000424   | 1000582   |
|  | HDPUH64  | HTTHS93   | HMVCG79   |

|  |                     |                        |           |                     |                        |                   |                      |                     |                   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|--|---------------------|------------------------|-----------|---------------------|------------------------|-------------------|----------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |                     |                        |           |                     |                        |                   |                      |                     | * .               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     | ,                   |                     |                     |                     |
| S0142: 1, L0800: 1,<br>L0790: 1, H0539: 1, | H0555: 1, S3014: 1, | S0028: 1, L0754: 1 and | L0759: 1. | H0615: 2, S0376: 1, | L0766: 1 and L0754: 1. |                   | AR060: 16, AR052: 8, | AR053: 7, AR033: 6, |                   | AR039: 5, AR061: 5, |                     | L0776:              | S0438: 6, L0752: 6, | H0677: 6, S0410: 5, | S0440: 5, L0764: 5, | L0749: 5, T0049: 4, | S0132: 4, L0766: 4, | H0648: 4, L0759: 4, | L0519: 3, H0684: 3, | L0748: 3, L0747: 3, | L0757: 3, S0358: 2, | S0444: 2, T0006: 2, | L0775: 2, L0806: 2, | S0152: 2, L0751: 2, | L0750: 2, L0758: 2, | S0436: 2, H0423: 2, | H0624: 1, H0556: 1, | H0157: 1, H0295: 1, |
|  |                     |                        |           | Gly-2 to Ile-8,     | Glu-13 to Ser-25,      | Glu-41 to Gly-52. | Pro-2 to Gly-25,     | Gly-40 to Lys-62,   | Arg-73 to Ala-80, | 4,                  | Pro-190 to His-195, | Glu-211 to Ala-219. |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |
|  |                     |                        |           | 2478                | ,                      | •                 | 2479                 |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                     |                        |           | 52 - 648            |                        |                   | 2 - 661              |                     |                   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                     |                        |           | 303                 |                        |                   | 304                  |                     |                   |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |
|  |                     |                        |           | 1000669             |                        |                   | 1000875              |                     |                   |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     | -                   |                     |                     | •                   |                     |                     |                     |                     |                     |
|  |                     |                        |           | HODHK20             |                        |                   | HCHIMO53             |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|-------------------|-----------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     | •                      |           |                   |                       |
| H0294: 1, S0114: 1, | H0657: 1, H0656: 1, | H0484: 1, S0356: 1, | S0376: 1, S0360: 1, | S0408: 1, S0007: 1, | S0045: 1, H0586: 1, | H0331: 1, T0109: 1, | T0048: 1, L0040: 1, | H0046: 1, S0051: 1, | H0083: 1, H0606: 1, | H0169: 1, H0316: 1, | H0268: 1, H0412: 1, | T0042: 1, S0464: 1, | H0633: 1, L0763: 1, | L0770: 1, L0769: 1, | L0638: 1, L0771: 1, | L0648: 1, L5564: 1, | L0381: 1, L0774: 1, | L0378: 1, L0655: 1, | L0659: 1, L0809: 1, | L0788: 1, L0532: 1, | H0682: 1, H0659: 1, | S0328: 1, S0380: 1, | S0350: 1, H0696: 1, | H0436: 1, L0753: 1, | S0434: 1, L0592: 1, | L0608: 1, H0668: 1 and | S0026: 1. |                   | 27, AR089: 24, AR060: |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     | ·                   | -                      |           | Gly-33 to Trp-52, | Tyr-104 to Ser-110,   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     | _                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                        |           | 2480              |                       |
|                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1-666             |                       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ••••                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     | -                      |           | 305               |                       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠.                  |                     |                        |           | 1001066           |                       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                        |           | HFKKG84           |                       |

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|-----------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 22, AR061: 15, AR055: | $\overline{}$       | L0/66: 10, L0/79: 5, | 10769: 3, 10761: 3, | L0747: 3, H0170: 2, | H0686: 2, H0617: 2, | L0800: 2, L0794: 2, | L0806: 2, L0776: 2, | L0754: 2, H0685: 1, | H0295: 1, H0656: 1, | H0402: 1, S0418: 1, | H0486: 1, L0471: 1, | <del>_</del> | H0688: 1, H0135: 1, | H0625: 1, S0422: 1, | L0772: 1, L0646: 1, | L0643: 1, L0644: 1, | L0764: 1, L0768: 1, | L0807: 1, L0783: 1, | H0522: 1, L0750: 1, | L0777: 1, L0755: 1, | L0731: 1, S0026: 1 and | S0424: 1. | H0415: 2         |                     | L0731: 8, H0542: 7, | H0422: 7, H0545: 6, | H0521: 6, L0750: 6, | H0423: 6, H0617: 5, |
| lle-150 to Ala-157,   | Ser-159 to Ala-171, | Giy-1/8 to Giy-186,  | Aid-100 to 501-204. |                     |                     |                     |                     |                     |                     |                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Ser-5 to Glu-12. | Lys-106 to Leu-111. |                     |                     |                     |                     |
|                       |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |              |                     | -                   |                     |                     |                     |                     |                     |                     |                        |           | 2481             | 2482                |                     |                     |                     |                     |
|                       |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |              |                     |                     |                     |                     | -                   |                     |                     |                     | -                      |           | 127 - 267        | 40 - 621            |                     |                     |                     |                     |
|                       |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |              |                     |                     |                     |                     | •                   | -                   |                     |                     |                        |           | 306              | 307                 |                     |                     |                     |                     |
|                       |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |              |                     |                     | •                   |                     |                     |                     |                     |                     |                        |           | 1001333          | 1001695             |                     |                     |                     |                     |
|                       |                     |                      |                     |                     |                     |                     | •                   |                     |                     |                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HOFMT20          | HPAMB04             |                     |                     |                     |                     |

|                    | _                   |                    |                      |                  |                  |                     | •       |                    |                     |                     |                     |                     |                      |                      |                     |                     |                     |        |                     |        |                    |                  |                  |                  |                  |                  |                  |                  |                    |
|--------------------|---------------------|--------------------|----------------------|------------------|------------------|---------------------|---------|--------------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|---------------------|--------|---------------------|--------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|
|                    |                     |                    |                      |                  | ,                | ·                   |         |                    |                     |                     |                     |                     |                      |                      |                     | ,                   |                     |        |                     |        |                    |                  |                  |                  |                  |                  |                  |                  |                    |
|                    |                     |                    |                      |                  |                  |                     |         |                    |                     |                     |                     |                     |                      |                      |                     |                     |                     |        |                     |        |                    |                  |                  |                  |                  |                  |                  |                  |                    |
| -                  |                     |                    |                      |                  |                  |                     |         |                    |                     |                     |                     |                     |                      |                      |                     |                     |                     |        |                     |        |                    |                  |                  |                  |                  |                  |                  |                  |                    |
| 83: 4,             | 82: 4,              | 35: 4,             | 55: 4,               | 95: 3,           | 39: 3,           | 70: 3,              | 9: 3,   | 11: 3,             | 38: 2,              | 50: 2,              | 44: 2,              | 86: 2,              | 00: 2,               | 48: 2,               | 90: 2,              | 66: 2,              | 51: 2,              | 57: 2, | 87: 2,              | 52: 2, | 84: 1,             | 40: 1,           | 57: 1,           | 64: 1,           | 20: 1,           | 89: 1,           | 45: 1,           | 46: 1,           | 30: 1,             |
| H0689: 5, H0083: 4 | H0494: 4, L0382: 4, | H0682: 4, H0435: 4 | .0747: 4, L.0755: 4, | H0159: 3, H0295: | H0255: 3, H0039: | H0087: 3, L0770: 3, | 3, L08( | S0328: 3, L0601: 3 | H0402: 2, H0638: 2, | S0132: 2, H0250: 2, | H0581: 2, H0544: 2, | H0546: 2, H0086: 2, | .0769: 2, L.0800: 2, | .0773: 2, L.0648: 2, | ,0665: 2, H0690: 2, | H0659: 2, H0666: 2, | H0522: 2, L0751: 2, | 2, L07 | .0596: 2, L0587: 2, | 2, L03 | H0556: 1, H0584: 1 | H0685: 1, S0040: | H0294: 1, H0657: | H0663: 1, H0664: | H0125: 1, S0420: | S0376: 1, H0489: | H0580: 1, S0045: | H0069: 1, S0346: | H0251: 1, H0530: 1 |
| H0689:             | H0494:              | H0682:             | L0747:               | H0159            | H0255            | H0087               | L0768:  | S0328:             | H0402               | S0132:              | H0581               | H0546               | L0769:               | L0773:               | L0665:              | H0659               | H0522               | L0754: | L0596: 2, I         | L0591: | H0556              | H0685            | H0294            | H0663            | H0125            | S0376:           | H0580            | 6900H            | H0251              |
|                    |                     |                    |                      |                  |                  |                     |         |                    |                     |                     |                     |                     |                      |                      |                     | ,                   | ,                   |        |                     |        |                    |                  |                  |                  |                  |                  |                  |                  |                    |
|                    |                     |                    |                      |                  |                  |                     |         |                    |                     |                     |                     |                     |                      |                      |                     |                     |                     |        |                     |        |                    |                  |                  |                  |                  | ٠.               |                  |                  | ,                  |
|                    |                     |                    |                      |                  |                  |                     |         |                    |                     |                     |                     |                     |                      |                      |                     | -                   |                     |        | -                   |        |                    |                  |                  |                  |                  | _                |                  |                  |                    |
|                    |                     |                    |                      |                  | ···-             |                     |         |                    |                     |                     |                     |                     |                      |                      |                     |                     |                     | · ·    |                     |        |                    |                  |                  |                  |                  |                  | ···-             |                  |                    |
|                    |                     |                    |                      |                  |                  |                     |         |                    |                     |                     |                     |                     | ٠                    |                      |                     |                     |                     |        |                     |        |                    |                  |                  |                  |                  |                  |                  |                  |                    |
| -                  |                     |                    |                      |                  | •                |                     |         |                    |                     | •                   |                     |                     |                      |                      |                     |                     |                     |        |                     |        |                    | •                |                  |                  |                  | -                |                  |                  | -                  |
|                    |                     |                    |                      |                  |                  |                     |         | ,                  | •                   |                     |                     |                     | _                    |                      |                     |                     |                     |        |                     |        |                    |                  | •                |                  |                  |                  |                  |                  |                    |
|                    |                     |                    |                      | •                |                  |                     |         |                    |                     |                     |                     |                     |                      |                      |                     |                     |                     |        |                     |        |                    |                  |                  |                  |                  |                  |                  |                  |                    |
|                    |                     |                    |                      |                  |                  |                     |         |                    |                     |                     |                     |                     |                      | <del></del> ,        |                     |                     |                     |        |                     |        | <del></del>        |                  |                  |                  |                  |                  |                  |                  |                    |
|                    |                     |                    |                      |                  |                  |                     |         |                    |                     |                     |                     |                     |                      |                      |                     |                     |                     |        |                     |        |                    |                  |                  |                  |                  |                  |                  |                  |                    |

|                     |                     |                     |   |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |                    |                   | <del>-</del>          | ó                     | o,                    | oʻ                    | <u>,</u>              | <u> </u>              | oʻ                    | 1,                    | 0,                    |
|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|--------------------|-------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                     | _                   |                     |   |                     |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                     | •                   |                     |                     |                        |                    |                   | 107741                | 113900,               | 122720,               | 122720,               | 126340,               | 126391,               | 160900                | 164731,               | 173850                |
|                     |                     |                     |   | ÷                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                    |                   | 19q13.2               |                       |                       |                       |                       |                       |                       |                       |                       |
| H0012: 1, H0620: 1, | H0181: 1, H0212: 1, | S0364: 1, H0388: 1, |   | H0560: 1, S0466: 1, | S0440: 1, H0646: 1, | S0144: 1, L0637: 1, | L0764: 1, L0662: 1, | L0364: 1, L0794: 1, | L0774: 1, L0806: 1, | L0658: 1, L0656: 1, | L0659: 1, L0383: 1, | L0789: 1, L0666: 1, | L0664: 1, S0380: 1, | H0518: 1, H0134: 1, | S0404: 1, H0187: 1, | L0749: 1, H0445: 1, | S0434: 1 and H0543: 1. | H0615: 2, L0794: 2 | and H0266: 1.     | H0617: 43, H0341: 38, | S0046: 37, L0747: 34, | S0126: 30, L0507: 29, | L0500: 29, S0007: 28, | H0087: 28, L0775: 28, | L0509: 28, H0594: 27, | H0333: 24, L0772: 24, | S0132: 23, H0620: 23, | L0502: 23, L0768: 21, |
|                     | <b></b>             |                     |   |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Thr-2 to Gln-8,    | Glu-20 to Gly-26. | Ile-8 to Gly-13,      | Pro-62 to Phe-68,     | Gly-95 to Gly-101,    | .^                    | Glu-129 to Leu-146.   |                       |                       |                       |                       |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2483               |                   | 2484                  |                       |                       |                       |                       |                       |                       | 1                     |                       |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     | •••                 |                     |                     |                     |                     |                        | 368 - 682          |                   | 328 - 807             |                       | ,                     |                       |                       |                       |                       | ;                     |                       |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     | •                   | ٠                   |                     |                     |                     |                     |                     |                        | 308                |                   | 309                   |                       |                       |                       |                       |                       |                       |                       |                       |
|                     |                     |                     | • |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                        | 1001901            |                   | 1001954               |                       |                       |                       |                       |                       |                       |                       |                       |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HODEK48            |                   | HVVCB28               |                       |                       |                       |                       |                       |                       |                       |                       |

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| 207750,               | 248600,               | 258501                |                       |        |              |              |                | •            |                       |              |                |            |            |                |               |                |                |                |                      |                     |                    | •                  |                     |                     |                     |                     |                  |                     | .                  |
| 02                    | <u>4</u>              | 23                    | •                     |        |              |              |                | •            |                       |              |                | -          |            |                |               |                |                |                |                      |                     |                    |                    |                     |                     |                     |                     |                  |                     |                    |
|                       |                       |                       |                       |        |              |              |                |              |                       |              |                |            |            |                | ٠             |                |                |                |                      |                     |                    |                    |                     |                     |                     |                     |                  |                     |                    |
| _                     |                       |                       |                       |        |              |              |                |              |                       |              |                |            |            | _              |               |                |                |                |                      |                     |                    |                    |                     |                     |                     |                     |                  |                     |                    |
| 10: 20                | 14: 19                | 402: 17               | 14: 17                | 67: 16 | 93: 15,      | 88: 15,      | 14, L0518: 14, | 44: 13,      | 78: 12                | 27: 12,      | 12, L0748: 12, | 351: 11    | 535: 11    | 11, L0774: 11, | 1, S0114: 10, | 10, T0109: 10, | 10, L0764: 10, | 10, L0521: 10, | 02:9,                | 9: 9,               | 9.03               | 7:9,               | 95: 8,              | 12: 8,              | 12: 8,              | 6: 8,               | 70: 7,           | 30: 7,              | 24: 7,             |
| 0, LOS                | 9, LOS                | 19, H0 <sub>2</sub>   | 7, S30                | 6, L07 | 15, L0493: 1 | 15, L0588: 1 | 14, L05        | 13, S0144: 1 | 2, S02                | 12, S0027: ] | 2, L07         | 11, H0351: | 11, H0635: | 1, L07         | 1, S01        | [0, T0]        | 0, LO7         | 10, LOS        | 10, TOC              | ), H000             | ), L052            | ), LO51            | , H029              | 8, H00              | 8, S01 <sup>4</sup> | 3, S020             | 3, H01′          | 7, S02              | 7, H04             |
| .0776: 20, L0510: 20, | S0134: 19, L0514: 19, | H0670: 19, H0402: 17, | S0045: 17, S3014: 17, | 503: 1 | .0471: 1     | .0511: 1     | H0040:         | H0188:       | .0785: 12, S0278: 12, | .0809: 1     | 30028: 1       | H0657:     | H0549:     | 0763: 1        | .0750: 1      | H0255:         | .0506: 1       | .0773: 1       | .0783: 10, T0002: 9, | S0218: 9, H0009: 9, | 30344: 9, L0520: 9 | .0515: 9, L0517: 9 | .0731: 9, H0295: 8, | HO123: 8, H0012: 8, | H0634: 8, S0142: 8, | .0504: 8, S0206: 8, | H0352: 8, H0170: | H0069: 7, S0280: 7, | H0083: 7, H0424: 7 |
| T<br>T                | <u>S</u>              | 王                     | S                     | ĭ      | 그            | 그            | 茧              | 耳            | <u> </u>              | <u> </u>     | <u>S</u>       | Ĭ          | I          | <u> </u>       | ĭ             | 臣              | ĭ              | ュ              | <u> </u>             | <u>X</u>            | <u> </u>           |                    | 그                   | 田                   | H                   | <u> </u>            | 王                | 王.                  | 프                  |
|                       |                       |                       |                       |        |              |              |                | ٠.           |                       |              |                |            |            |                |               |                |                |                |                      |                     |                    |                    |                     |                     |                     |                     |                  |                     |                    |
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|                       |                       |                       |                       |        |              | <u>·</u>     |                |              |                       |              |                |            |            |                |               |                |                |                |                      |                     |                    | <del></del>        |                     |                     |                     |                     |                  |                     |                    |
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| L                     |                       |                       |                       |        |              |              |                | -            | _                     |              |                |            |            |                |               |                |                |                |                      |                     |                    |                    |                     |                     |                     |                     |                  |                     |                    |

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| L               |                    |                |                    |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                    |
|                 | ٠.,                | • ~            | ٠.                 | ٠ _ ^               | · \C                | ر<br>در             | . ~                 | س                   | 6,                  | 'n                  | ر.                  | Ś                   | ر.                  | ,<br>,              | 5,                 | 5,                  | 5,                  | 5,                  | 5,                  | رم                  | 'n                  | 'n                  | 4,                  | 4,                 | 4,                  | 4,                  | 4,                  | ₩.                  | 4,                 |
| H0213-7 H0100-7 | .0762: 7, L0499: 7 | 19.            | 759: 7             | .0596: 7, L0361: 7, | H0543: 7, S0116: 6, | H0305: 6, S0358: 6, | S0360: 6, T0060: 6, | H0575: 6, T0048: 6, | H0081: 6, H0024: 6, | H0135: 6, L0769: 6, | .0497: 6, L0512: 6, | HO144: 6, LO581: 6, | H0556: 5, S0040: 5, | S0222: 5, H0441: 5, | H0586: 5, H0559: 5 | H0486: 5, H0318: 5, | H0581: 5, H0597: 5, | H0014: 5, H0328: 5, | H0181: 5, H0606: 5, | .0065: 5, L0505: 5, | H0672: 5, S0328: 5, | H0134: 5, S3012: 5, | 10049: 4, H0492: 4, | 70040: 4, H0013: 4 | H0099: 4, H0266: 4, | H0615: 4, H0124: 4, | H0412: 4, T0041: 4, | .0501: 4, L0379: 4, | H0689: 4, H0660: 4 |
| 7 HO            | Ę,                 | 10,            | . 1.07             | , <u>1.03</u>       | 7, S0               | 5, SO               | , T00               | 5, TO               | 5, HO               | 5, LO               | 5, 1.05             | 5, 100              | 5, S0               | ; H0                | 5, HO              | 5, H0               | 5, HO               | 5, H0               | 5, H0               | 5, 10,              | 5, SO.              | 5, S3               | 4, HO               | 4, HO              | 4, H0               | 4, H0               | 4, T0               | 4, LO               | 4, H0              |
| 213.            | 62: 7              | 0375-7 10519-7 | S0037: 7, L0759: 7 | 396: 7              | 543:                | 305: (              | 360: 6              | 575: (              | 081: (              | 135: (              | 497: ¢              | 144: (              | 556:                | 222: 5              | 586:               | 486:                | 581:                | 014:                | 181:                | 365: 5              | 672:                | 134:                | 749: 7              | 340:7              | 660                 | 615:                | 412:                | 501: 4              | . :689             |
| HU              | 0                  | <u> </u>       | 8                  | <u>S</u>            | Ĥ                   | HO                  | 203                 | Ë                   | ŎĦ                  | HO                  | <u>0</u>            | H                   | H                   | <u>S</u> 02         | <u>H</u>           | <u>H</u>            | H                   | HO<br>H             | H                   | <u> </u>            | 9                   | H                   | <u>ě</u>            | Ĕ                  | <u>H</u>            | <u>H</u>            | <u>H</u>            | <u> </u>            | 丑                  |
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| S0044: 4, S0032: 4, | .0754: 4, L0757: 4, | H0265: 3, L0760: 3, | H0484: 3, H0306: 3, | H0125: 3, T0039: 3, | H0309: 3, H0178: 3, | H0687: 3, H0039: 3, | H0063: 3, H0494: 3, | H0646: 3, L0806: 3, | .0545: 3, L0529: 3, | .0368: 3, T0068: 3, | H0684: 3, H0659: 3, | S0378: 3, H0576: 3, | S0390: 3, L0755: 3, | .0758: 3, H0595: 3, | .0604: 3, L0362: 3, | H0136: 3, H0422: 3, | H0624: 2, H0395: 2, | H0218: 2, H0220: 2, | H0685: 2, S0342: 2, | H0294: 2, H0381: 2, | H0661: 2, H0241: 2, | S0420: 2, H0580: 2, | H0411: 2, S6022: 2, | H0455: 2, H0249: 2, | H0574: 2, L0623: 2, | F0114: 2, H0156: 2, | H0108: 2, S0346: 2, | H0421: 2, H0052: 2, | H0204: 2, H0596: 2, |
| S                   | _=                  | <u> </u>            | <u>i+i</u>          | <u>i-L-i</u>        | <b>, 114</b>        | <u>, 141</u>        | <u> </u>            | <u> </u>            |                     | <u>. e-i</u>        | <u> </u>            | <u> </u>            | <u></u>             | <u>h-l</u>          | 1                   |                     | <u>, 1-14</u>       | <u> </u>            | <u> </u>            | <u> </u>            | <u></u>             | <u> </u>            | 1                   | ·                   |                     |                     |                     |                     | Ī                   |
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|      | ر.<br>د             | ٠.                  | <u>م</u> ر         | ~î                  | -5        | ລົ                  | ~                   | ~î                  | ~                   | 2,                  | 2,                  |                     |                     | -5                  |             |                     | 2,                  | ລົ                  | ~.                   | -2                  |                     | ~                  | I,               | 1,                 | •     |                    | 1,               | •                | 1,                 | 1,               |
| 7,70 | 7.0460:             | 051: 2              | )288: 2            | 028: 2              | T0006: 2, | 7418:               | 10628: 2, H0032: 2, | 10674: 2, H0598: 2, | 3038: 3             | 2413: 2             | 560:                | 647:2               | 761:2               | .0662: 2, L0387: 2, | L0533: 2,   | .0542: 2, L0382: 2, | H0690: 2, H0215: 2, | 777: 2              | .0587: 2, L.0597: 2, | .0605: 2, L0603: 2, | 026: 2              | .0600: 2, H0008: 2 | 0149             | H0585: 1, H0686: 1 |       | 212: 1             | 0638:            | 008: 1           | H0339: 1, H0151: 1 | 0619:            |
| 7,   | 7, 11,              | : 2, S0             | : 2, HC            | : 2, HC             | : 2, T0   | : 2, H(             | : 2, H(             | : 2, H(             | : 2, H(             | : 2, H(             | : 2, H(             | 2, H0               | 2, L0               | 2, 10               | 2, L0       | 2, 1.0              | : 2, H(             | 2, LC               | 2, 1.0               | 2,10                | 2, S0               | 2, HC              | : 1, H(          | : 1, H(            | 1,10  | 1, S0              | : 1, H(          | 1, T0            | : 1, H(            | : 1, H(          |
| 1001 | HU231: 2, HUU40: 2, | H0041: 2, S0051: 2, | H0271: 2, H0288: 2 | H0284: 2, H0028: 2, | H0364: 2, | H0033: 2, H0418: 2, | <b>H0628</b>        | <b>H0674</b>        | H0163: 2, H0038: 2, | H0616: 2, H0413: 2, | H0059: 2, H0560: 2, | S0150: 2, H0647: 2, | S0210: 2, L0761: 2, | .0662               | .0766: 2, 1 | .0542               | 0690E               | H0214: 2, L0777: 2, | .0587                | .0605               | S0106: 2, S0026: 2, | 0090               | H0171: 1, H0149: | H0585              | L0778 | S0180: 1, S0212: 1 | H0228: 1, H0638: | S0376: 1, T0008: | H0339              | H0208: 1, H0619: |
|      | 4_                  | <u> </u>            | <u> </u>           | <u> </u>            | <u> </u>  |                     |                     |                     |                     |                     |                     | <u> </u>            | <u></u>             |                     |             |                     |                     |                     |                      |                     | <u> </u>            |                    |                  |                    |       |                    |                  | ,                |                    |                  |
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| 026: 1,          | 369: 1,          | 3643: 1, | 244: 1,            | 1, H0427: 1, | 082: 1,          | 010: 1,          | 251: 1,          | 1115: 1,         | , H0232: 1, | 0530: 1,         | 0545: 1,         | 0003: 1,         | 015:1,  | 0051:1,          | 408: 1,          | 3354: 1,  | 0416: 1,         | 0252: 1,         | 0622: 1,         | )604: 1,         | 0031:1,          | 0166: 1, | 0169: 1, | 0068: 1,         | 316: 1,          | 0900: 1,         | 0264: 1,         | 0268: 1,           | 038: 1,          |
| H0393: 1, S6026: | S0300: 1, H0369: | 0: 1, H( | L0622: 1, H0244: 1 | 50: 1, Ĥ(    | H0153: 1, T0082: | H0004: 1, S0010: | S0182: 1, H0251: | H0085: 1, T0115: | 0: 1, HC    | H0327: 1, H0530: | 10546: 1, H0545: | H0045: 1, T0003: | 30050: 1, H0015:                              | H0200: 1, H0051: | 30388: 1, H0408: | 73: 1, H( | H0109: 1, H0416: | H0290: 1, H0252: | H0688: 1, H0622: | F0023: 1, H0604: | H0030: 1, H0031: | 30: 1, H | 73: 1, H | H0212: 1, H0068: | S0366: 1, H0316: | S0036: 1, H0090: | H0591: 1, H0264: | H0433: 1, H0268: 1 | H0102: 1, S0038: |
| H035             | S030             | H037     | L062               | H0250: 1     | H015             | H000             | S018             | 00H              | T0110: 1    | H032             | H05              | H00k             | S005  | H02(             | S038             | H00.      | H010             | H029             | 90H              | T002             | H000             | H018     | .90H     | H02              | S036             | S003             | H059             | H04                | H01(             |
|                  |                  |          |                    |              |                  |                  |                  |                  |             |                  |                  |                  |   |                  |                  |           |                  |                  |                  |                  |                  |          |          |                  |                  |                  |                  |                    |                  |
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|   |                                  | 120550,<br>120570,<br>120575,<br>121800,   |
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|   |                                  | 1p34.1   |
| H0128: 1, T0042: 1,<br>H0280: 1, L0475: 1,<br>H0334: 1, H0625: 1,<br>H0366: 1, H0609: 1,<br>H0130: 1, H0641: 1,<br>L0371: 1, L0646: 1,<br>L0522: 1, L0784: 1,<br>L0523: 1, L0584: 1,<br>L0540: 1, L0558: 1,<br>L0540: 1, L0558: 1,<br>L0540: 1, L0558: 1,<br>H0528: 1, L0663: 1,<br>L0564: 1, S0216: 1,<br>S0296: 1, H0682: 1,<br>H0521: 1, H0522: 1,<br>S0146: 1, H0187: 1,<br>L0752: 1, H0343: 1,<br>L0592: 1, L0593: 1,<br>H0668: 1, H0653: 1, | H0542: 1, S0424: 1 and H0293: 1. | H0341: 36, L0748: 29,<br>L0747: 23, S0360: 19,<br>L0740: 18, H0494: 16,<br>L0750: 15, L0757: 15, |
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| 130500,               | 133200,               | 138140,               | 171760,             | 171760,               | 178300,               | 255800               | •                   |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del>;</del>        |                     | <del></del>         |                     |                     |                     |                     |
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| H0521: 14, L0754: 14, | .0591: 14, S0007: 13, | S0046: 13, S0126: 13, | 340: 12, S0144: 12, | L0752: 12, L0588: 12, | S0344: 11, S0424: 11, | S0036: 10, H0556: 9, | S0278: 9, S0222: 9, | H0370: 9, H0014: 9, | H0617: 9, L0775: 9, | 742: 9, L0745: 9, | _0731: 9, S0040: 8, | H0431: 8, H0266: 8, | .0769: 8, L0663: 8, | S0328: 8, S0152: 8, | S0420: 7, H0575: 7, | H0083: 7, H0090: 7, | H0412: 7, S0142: 7, | .0768: 7, L0666: 7, | .0665: 7, H0144: 7, | H0519: 7, L0439: 7, | H0657: 6, H0052: 6, | .0471: 6, T0006: 6, | H0553: 6, H0628: 6, | H0135: 6, L0806: 6, | S0374: 6, H0658: 6, | .0744: 6, L0593: 6, | H0624: 5, S0358: 5, | S0045: 5, H0331: 5, | H0318: 5, H0581: 5, |
| (HO;                  | <u>101</u>            | 200                   | OH                  | 101                   | 803                   | )OS                  | S0S                 | OH                  | OH                  | <u>101</u>        | <u> </u>            | OH OH               | <u>91</u>           | <u>30S</u>          | 80 <u>k</u>         | OH .                | OH                  | <u>101</u>          | <u> </u>            | OH OH               | OH                  | <u>ro</u>           | OH                  | OH.                 | <u>SOS</u>          | <u>27</u>           | OH OH               | )OS                 | HO                  |
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| H0032: 5, T0067: 5, H0623: 5, L0662: 5, L0667: 5, L0669: 5, L0667: 5, L0669: 5, L0668: 5, S0030: 5, L0755: 5, L0596: 5, L0759: 5, L0759: 5, L0759: 5, L0759: 5, L0759: 5, L0759: 4, H048: 4, H0125: 4, H048: 4, H0125: 4, H068: 4, H0125: 4, H0013: 4, H0013: 4, H0013: 4, H0034: 4, H0068: 4, H068: 4, H0693: 4, H0693: 4, H0673: 4, L0653: 4, H0672: 4, L0653: 4, H0672: 4, S0031: 4, H0672: 4, S0031: 4, H0672: 4, S0031: 4, H0672: 4, S0031: 4, H0672: 4, S0031: 4, H0672: 4, S0031: 4, H0672: 4, S0031: 4, H0672: 4, S0031: 4, H0672: 4, H0676: 4, H0672: 3, H068: 3, H068: 3, T0082: 3, H068: 3, T0082: 3, H068: 3, H068: 3, H068: 3, H068: 3, H068: 3, H068: 3, H068: 3, H068: 3, H068: 3, H068: 3, H068: 3, H068: 3, H067: 3, H068: 4, H068: 3, H068: 4, H068 |                   |                    |                   |                   |                   |                   |                   |                    |                   |                   |                   |                    |                   |                    | -                  |                    | -                  | •                 |                    |                    |                   |                   | •                 |                    |                    |                    |                   |                        |                   |                   |
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|  | 032: 5, T0067: 5, | 1623: 5, L0662: 5, | 657: 5, L0659: 5, | 664: 5, S0330: 5, | 522: 5, S0037: 5, | 755: 5, L0596: 5, | 595: 5, S0192: 5, | 0650: 4, S0212: 4, | 484: 4, H0125: 4, | 376: 4, S0132: 4, | 393: 4, H0441: 4, | 0013: 4, S0010: 4, | 346: 4, H0031: 4, | )068: 4, H0634: 4, | )616: 4, H0268: 4, | )413: 4, H0059: 4, | )633: 4, L0653: 4, | 655: 4, L0518: 4, | )520: 4, H0660: 4, | )672: 4, S3012: 4, | 027: 4, S0028: 4, | 758: 4, S0031: 4, | 581: 4, S0026: 4, | )542: 4, H0506: 4, | 1171: 3, T0049: 3, | 1255: 3, H0638: 3, | 418: 3, S0356: 3, | 3, T0082: 3, T0082: 3, | 048: 3, H0596: 3, | 327: 3, H0046: 3, |
|  | 田                 | H                  | 3                 | 27                | H                 | 2                 | 3                 | H                  | H                 | SO                | H                 | Ħ                  | OS.               | H                  | H                  | <u>H</u>           | H                  | <u> </u>          | H                  | Ħ                  | SC                | <u> </u>          | <u> </u>          | 耳                  | 豆                  | H                  | SC                | Ĭ                      | Ĭ                 | 直                 |
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| 520: 3,            | 94: 3,             | 64: 3,              | 3,                 | 100: 3,             | 42: 3,              | 02: 3,              | 64: 3,              | 76: 3,              | 82: 3,             | 134: 3,            | 90: 3,              | 92: 3,              | 43: 3,              | 02: 2,              | 83: 2,              | 83: 2,              | 550: 2,             | 587: 2,             | 542: 2,             | 532: 2,             | 40:2,               | 69: 2,              | 599: 2,             | 304: 2,             | 544: 2,             | 150: 2,             | 050: 2,             | 51:2,               | [42: 2,             |
| H0178: 3, H0620: 3 | .0163: 3, H0594: 3 | H0328: 3, S0364: 3, | H0038: 3, H0264: 3 | H0056: 3, H0100: 3, | 70041: 3, T0042: 3, | H0130: 3, S0002: 3, | .0374: 3, L0764: 3, | .0771: 3, L0776: 3, | .0783: 3, H0682: 3 | H0435: 3, H0134: 3 | H0555: 3, S0390: 3, | 33014: 3, L0592: 3, | .0599: 3, H0543: 3, | H0170: 2, T0002: 2, | S0134: 2, H0583: 2, | S0116: 2, H0483: 2, | H0661: 2, H0550: 2, | H0592: 2, H0587: 2, | H0333: 2, H0642: 2, | H0574: 2, H0632: 2, | .0622: 2, T0040: 2, | F0109: 2, H0069: 2, | H0156: 2, H0599: 2, | H0042: 2, H0004: 2, | H0530: 2, H0544: 2, | H0545: 2, H0150: 2, | H0123: 2, H0050: 2, | H0024: 2, S0051: 2, | H0252: 2, L0142: 2, |
| H0178              | L0163              | H0328               | H0038              | H0056               | T0041               | H0130               | L0374               | L0771               | L0783              | H0435              | H0555               | S3014               | L0599               | H0170               | S0134               | S0116               | H0661               | H0592               | H0333               | H0574               | L0622               | T0109               | H0156               | H0042               | H053C               | H0545               | H0123               | H0024               | H0252               |
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| 316.2           | 163: 2.             | H0551-2 H0379-2 | 475: 2,             | 365: 2,             | H0509: 2, H0646: 2, | 26: 2,              | 762: 2,             | L0765: 2, | L0774: 2,   | L0654: 2,   | 529: 2,             | 138: 2,              | H0593: 2, H0659: 2, | 380: 2,             | 751: 2,             | 753: 2,             | S0260: 2, H0445: 2, | 508: 2,              | .0362: 2, H0665: 2, | 422: 2,             | 384: 2,            | 265: 1,          | 402: 1,          | 294: 1           | 663: 1           | 228: 1           | S0354: 1, | L0717: 1, | H0411: 1 |
| 2 HO            | H0598: 2, H0163: 2, | ) HO            | T0280: 2, L0475: 2, | H0625: 2, L0065: 2, | 2, HO               | S0210: 2, S0426: 2, | H0529: 2, L0762: 2, | 2, L07    | 2, L07      | 2, L06      | .0526: 2, L0529: 2, | .0565: 2, L.0438: 2, | 2, HO               | H0670: 2, S0380: 2, | S0032: 2, L0751: 2, | .0746: 2, L0753: 2, | 2, H0               | .0605: 2, L.0608: 2, | 2, H0               | S0196: 2, H0422: 2, | S0452: 2, S0384: 2 | H0352: 2, H0265: | H0685: 1, S0402: | H0295: 1, H0294: | H0669: 1, H0663: | H0664: 1, H0228: | 1, SO     | : 1, LO   | 1,       |
| HOKOK 2 HO316 2 | H0598               | H0551           | H0280               | H0625:              | H0509               | S0210:              | H0529               | L0646: 2, | L0364: 2, ] | L0651: 2, I | L0526:              | L0565:               | H0593               | 0290H               | S0032:              | L0746:              | S0260:              | L0605                | 1.0362:             | S0196:              | S0452:             | H0352            | H0685            | H0295            | 6990H            | H0664            | L0005: 1, | H0208: 1, | H0351:   |
|                 |                     | <u> </u>        |                     |                     |                     |                     |                     |           |             |             |                     |                      | •                   |                     |                     |                     |                     |                      |                     |                     |                    |                  |                  |                  |                  |                  |           |           |          |
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|--|------------------|------------------|-----------|----------|-----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|------------------|------------------|----------|------------------|------------------|---|------------------|------------------|------------------|
|  |                  |                  |           |          |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |          |                  |                  | •   |                  |                  |                  |
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| 1,                                     | , <del>, ,</del> | 1,               | 1,        | 1,       | 1,        |                  | 1,               | 1,               | <del></del>      | 1,               | 1,               | 1,               | 1,               | 1,               | 1,               | 1,               | 1,               | 1,               | 1,        | 1,               | 1,               | 1,       | 1,               | .1.              |   | 1,               | 1,               | 1,               |
| , H0455: 1<br>, H0601:                 | , H0497:         | 10643: 1, L0586: | l, T0114: | , S0280: | l, H0349: | 10590: 1, H0274: | , H0390:         | S0049:           | , H0251:         | T0115: 1, H0597: | H0546: 1, H0012: | 70003: 1, S0050: | 10373: 1, S0388: | H0239: 1, H0510: | .0078: 1, S6028: | H0271: 1, H0188: | , H0290:         | S0003: 1, H0615: | l, H0428: | 10622: 1, H0644: | H0313: 1, H0181: | , H0674  | H0124: 1, H0591: | H0022: 1, H0561: | H0641: 1, H0142:                              | S0422: 1, H0026: | .0520: 1, L0640: | .0763: 1, L0638: |
| S6022: 1, H0455: 1<br>H0409: 1, H0601: |                  | H0643: 1         | r0060: 1  | H0250: 1 | H0002: 1  | H0590: 1         | H0618: 1, H0390: | S0182: 1, S0049: | H0194: 1, H0251: | F0115: 1         | H0546: 1         | r0003: 1         | H0373: 1         | H0239: 1         | r0078: 1         | H0271: 1         | S0336: 1, H0290: | S0003: 1         | H0688: 1  | H0622: 1         | H0313: 1         | H0169: 1 | H0124: 1         | H0022: 1         | H0641: 1                                      | S0422: 1         | L0520: 1         | L0763: 1         |
|  |                  |                  | <u> </u>  |          |           |                  | .—.              | <u>.v</u> .      |                  | <u></u>          |                  | <u> </u>         |                  |                  |                  | - <del></del>    |                  |                  | 11-       |                  |                  | •        |                  |                  |   |                  |                  |                  |
|  |                  |                  |           |          | •         |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |          |                  |                  |   |                  |                  |                  |
|  |                  |                  |           |          |           | •                |                  |                  |                  |                  | -                |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |          |                  |                  |   |                  | •                |                  |
|  |                  |                  |           |          |           |                  |                  |                  |                  | <u> </u>         |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |          |                  |                  |   |                  |                  |                  |
|  | ,                |                  |           |          |           | <del></del>      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |          |                  |                  | _   |                  |                  |                  |
|  | ,                |                  |           |          |           |                  |                  |                  |                  |                  |                  |                  |                  | ,,-              |                  |                  |                  | ·- <u>-</u>      |           |                  | 1                |          |                  |                  |   |                  |                  |                  |
|  |                  |                  |           |          |           |                  | •                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |          |                  |                  |   |                  |                  |                  |
|  | <u>-</u>         |                  |           |          |           |                  |                  |                  |                  |                  |                  |                  | _                |                  |                  |                  |                  |                  |           |                  |                  |          |                  |                  | <u>.,                                    </u> |                  |                  |                  |
|  |                  |                  |           |          |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |          |                  |                  |   |                  |                  |                  |

| L0637: 1, L0761: 1,<br>L0373: 1, L0648: 1,<br>L0521: 1, L0389: 1,<br>L0376: 1, L0784: 1,<br>L0523: 1, L0378: 1,<br>L0527: 1, L0517: 1,<br>L0383: 1, L0545: 1,<br>L0541: 1, L0368: 1, | <br>H0343: 1, S0434: 1,<br>L0361: 1, L0601: 1,<br>L0366: 1, S0106: 1,<br>H0667: 1, S0194: 1,<br>H0423: 1, L0697: 1 and<br>H0293: 1. | AR039: 12, AR033: 6,<br>AR053: 6, AR096: 6,<br>AR055: 6, AR089: 5,<br>AR104: 5, AR052: 5,<br>AR060: 4, AR061: 3<br>H0497: 1, H0617: 1,<br>L0769: 1, L0766: 1,<br>L0775: 1, H0670: 1 and |
|--|---|---|
|  |   | Asp-1 to Lys-12, Pro-18 to Arg-26, Asp-51 to Val-74, Ala-80 to Leu-102.   |
|  |   | 2486  |
|  |   | 68 - 472  |
| : .  |   | 311   |
|  |   | 1002096   |
|  | ,   | HDACA35   |

|           |   |  | <del></del>   |   |  | 1  |  |
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|           |   | <i>.</i>   |   |   |  | 144120,<br>147020,<br>147110   |  |
|           |   |  |   |   |  | 14q32.33   |  |
| H0672: 1. | AR052: 20, AR039:<br>14, AR053: 13, AR096:<br>11, AR033: 11, AR055:<br>9, AR089: 9, AR104:<br>8. AR061: 7, AR060: | 5<br>L0438: 6, L0439: 6,<br>L0776: 5, H0428: 4,<br>L0805: 4, H0687: 3, | L0789: 2, L0756: 2,<br>L0758: 2, L0361: 2,<br>S0212: 1, S0001: 1, | H0351: 1, H0587: 1,<br>H0581: 1, H0052: 1,<br>H0327: 1, H0178: 1, | L0769: 1, L0767: 1,<br>L0794: 1, L0807: 1,<br>S0152: 1, H0522: 1,<br>L0731: 1, L0759: 1 and<br>L0608: 1. | L0748: 29, L0581: 21,<br>H0510: 8, H0255: 5,<br>H0574: 5, H0506: 4,<br>H0331: 3, H0581: 3, | H0264: 3, L0803: 3,<br>L0774: 3, L0663: 3,<br>H0555: 3, S0116: 2,<br>H0632: 2, H0087: 2, |
|           | Pro-1 to His-7, Glu-61 to Lys-67, Arg-94 to Phe-104, Pro-164 to Trp-169.  |  |   |   |  | Thr-2 to Gln-13,<br>Ser-23 to Ser-28,<br>Ser-36 to Ser-42.                                 |  |
|           | 2487  |  |   |   |  | 2488   | _  |
|           | 1 - 639   |  |   |   |  | 1236 - 196   | . :  |
|           | 312   |  |   |   | ·  | 313  |  |
|           | 1002328   | ·  |   |   |  | 1002459  | ,  |
|           | HOVDG59   |  |   |   |  | HTJAD78  |  |

| H0509: 2, L0648: 2,<br>L0378: 2, H0254: 1,<br>H0486: 1, H0575: 1,<br>H0057: 1, H0015: 1,<br>H0487: 1, S0438: 1,<br>L0775: 1, L0526: 1,<br>L0664: 1, H0658: 1,<br>L0743: 1, L0751: 1,<br>L0779: 1, L0759: 1,<br>H0444: 1, S0308: 1,<br>H0595: 1 and L0605: 1. | S0212: 7, L0809: 7,<br>L0747: 7, S0045: 6,<br>H0046: 6, H0551: 6,<br>L0775: 6, L0751: 6,<br>L0749: 6, L0757: 6,<br>H0545: 5, S0126: 5,<br>S3012: 5, S0126: 5,<br>H0618: 4, H0318: 4,<br>H00251: 4, H0100: 4,<br>L0794: 4, L0438: 4,<br>S0027: 4, L0731: 4,<br>H0255: 3, H0644: 3,<br>L0776: 3, L0559: 3,<br>L0776: 3, L0739: 3,<br>L0665: 3, H0539: 3, |
|--|--|
|  | Cys-20 to Gly-29.  |
|  | 2489   |
|  | 170 - 508  |
|  | 314  |
|  | 1002468  |
|  | нсрск69  |

|                    |                     |                  |                     |                     |                     | <del></del>         | -                   |                     |                     |                      |                     |                     |                     |                 |                     |                     |                     |                          |                     |                    |                    |                  |                  |                  |               |                    |                  |                  |                 |
|--------------------|---------------------|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|-----------------|---------------------|---------------------|---------------------|--------------------------|---------------------|--------------------|--------------------|------------------|------------------|------------------|---------------|--------------------|------------------|------------------|-----------------|
|                    |                     |                  |                     |                     |                     |                     | _                   | <del></del> -       |                     |                      |                     |                     |                     |                 |                     |                     |                     |                          |                     |                    |                    | -                |                  |                  |               | <b>=</b>           |                  | <u> </u>         |                 |
| 6:2.               | 27: 2,              | 75: 2,           | 4: 2,               | 23: 2,              | 12: 2,              | 51: 2,              | 52: 2,              | 10: 2,              | 47: 2,              | 59: 2,               | 72: 2,              | 74: 2,              | 74: 2,              | L5623: 2,       | 53: 2,              | 60: 2,              | 21: 2,              | 37: 2,                   | 13: 2,              | 79: 2,             | 65: 1,             | 49: 1,           | 83: 1,           | 54: 1,           | 10: 1,        | 39: 1,             | 55: 1,           | 86: 1,           | 21: 1,          |
| S0046: 2, S0476: 2 | H0619: 2, H0427: 2, | H0599: 2, H0575: | 10052: 2, H0544: 2, | H0546: 2, H0123: 2, | H0050: 2, H0012: 2, | H0620: 2, H0051: 2, | H0188: 2, H0252: 2, | H0622: 2, S0440: 2, | H0509: 2, H0647: 2, | .0763: 2, L.0769: 2, | .0772: 2, L0372: 2, | ,0646: 2, L0374: 2, | .0803: 2, L0774: 2, | .0375: 2, L.56; | ,0666: 2, L0663: 2, | ,0664: 2, H0660: 2, | H0672: 2, H0521: 2, | H0631: 2, S0037: 2,      | S3014: 2, L0743: 2, | .0744: 2, L0779: 2 | .0758: 2, H0265: 1 | H0740: 1, T0049: | H0341: 1, H0483: | H0663: 1, S0354: | 30360: 1, S04 | H0734: 1, H0339: 1 | S0132: 1, H0455: | H0574: 1, H0486: | H0013: 1, L0021 |
| <u>V</u>           | <u> </u>            | <u> </u>         | 正                   | <u>=</u>            | 正                   | <u> </u>            | <u> </u>            | <u> </u>            | <u> </u>            | <u>,l</u>            | <u> </u>            | <u> </u>            | <u></u>             | <u>-</u>        | <u> </u>            | <u> </u>            | <u>ڼلن</u>          | <u>. <del>i L</del>i</u> | S                   | <u> </u>           | 브                  | , <u>144</u>     | <u> </u>         | <u>. 1-1-1</u>   | S             |                    | <u> </u>         |                  | 1               |
|                    |                     | _                |                     |                     |                     |                     |                     |                     |                     |                      |                     | <del></del>         |                     |                 |                     |                     |                     |                          |                     |                    |                    |                  |                  |                  |               |                    |                  |                  |                 |
|                    |                     |                  |                     |                     |                     |                     |                     |                     |                     |                      | ,                   |                     |                     |                 |                     |                     |                     |                          |                     |                    | <del></del>        |                  |                  |                  | · ·           |                    |                  |                  |                 |
| _                  |                     |                  |                     |                     |                     |                     | _                   |                     |                     |                      |                     |                     |                     |                 |                     | _                   | -                   |                          |                     |                    |                    |                  | _                |                  | •             |                    |                  |                  |                 |
|                    |                     |                  |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                 |                     |                     |                     |                          |                     |                    |                    |                  |                  |                  |               |                    |                  | ·                |                 |
|                    |                     |                  |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                 |                     |                     |                     |                          |                     |                    |                    |                  | ,                | 4                |               | ,                  |                  |                  |                 |

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|------------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|------------------|--------------------|------------------|------------------|------------------|--------------------|------------------|------------------|------------------|-----------|--------------|-----------|-------------|------------|--------|--------------|---------------|----------|--------------|--------------------|------------------|
|                  |                  |                  |                  |                  |        |                  |                  |                  |                  | •                  |                  |                  |                  |                    |                  |                  |                  |           |              |           |             |            |        |              |               |          |              |                    |                  |
|                  |                  |                  |                  |                  |        |                  | _                |                  |                  |                    |                  |                  |                  |                    |                  |                  |                  |           |              |           |             |            |        |              |               |          |              |                    |                  |
|                  |                  |                  |                  |                  |        |                  |                  |                  |                  |                    |                  |                  |                  |                    |                  |                  |                  |           |              |           |             |            |        |              |               |          |              |                    |                  |
|                  |                  |                  |                  |                  |        |                  |                  |                  |                  |                    |                  |                  |                  |                    |                  |                  |                  |           |              |           |             |            |        |              |               |          |              |                    |                  |
| 1,               | <del>-</del>     | . <del>.</del> . | : 1,             | : 1,             | : 1,   | . T              | : 1 <b>,</b>     | : 1,             | : 1,             | ): 1,              | : 1,             | . 1,             | ; T,             | : 1,               | : 1,             | : 1,             | <del>-</del>     | : 1,      | : <b>T</b> ; | : 1,      | <del></del> | : 1,       | .1,    | . 1 <b>,</b> | · <del></del> | . I,     | : <b>1</b> , | 1,                 | 7: 1,            |
| H0706: 1, S0346: | 70048: 1, H0085: | H0150            | H0009: 1, L0471: | H0015: 1, H0266: | S0214  | 10615: 1, H0039: | H0181: 1, H0617: | .0055: 1, L0455: | H0708: 1, H0135: | H0163: 1, H0040: 1 | H0269: 1, H0623: | H0059: 1, S0112: | .0351: 1, H0280: | 10494: 1, L0475: 1 | H0334: 1, H0561: | S0438: 1, H0633: | S0142: 1, S0210: | 1.0770    | L0764:       | 10648     | T0767:      | L0364:     | L0804: | L0509:       | L0654:        | L0384: ] | L0368:       | H0144: 1, T0068: 1 | H0520: 1, H0547: |
| 06: 1,           | 48: 1, ]         | 63: 1,           | 09:1,            | 15: 1,           | 86: 1, | 15: 1,           | 81: 1,           | 55: 1,           | 08: 1,           | 63: 1,             | 69: 1,           | 59: 1,           | 51: 1,           | 194: 1,            | 34: 1,           | 38: 1, ]         | 42: 1,           | .0762: 1, | .5566: 1,    | .0771: 1, | .0662: 1,   | 0768: 1,   | -:     |              | 0653: 1,      |          |              | <u>4</u> ; 1,      | 520: 1,          |
| H07              | T00              | H02              | 0H               | <u>H</u>         | H02    | 90H              | H01              | <u>9</u>         | H07              | H01                | H02              | 00H              | <u> 103</u>      | HOH                | H03              | 8<br>8           | S01              | 107       | 1.55         | 107       | 907         | <u> 10</u> | 103    | 107          | <u>1</u> 06   | 105      | <u>5</u>     | EH<br>EH           | HOS              |
|                  |                  |                  |                  |                  |        |                  |                  |                  | 1.               |                    |                  |                  |                  |                    |                  |                  |                  |           |              |           |             |            |        |              |               |          |              |                    |                  |
|                  |                  |                  |                  |                  |        |                  |                  |                  |                  |                    |                  |                  |                  |                    |                  |                  |                  |           |              | •         |             |            |        |              |               |          |              |                    |                  |
|                  |                  |                  |                  |                  |        |                  |                  |                  |                  |                    |                  |                  |                  |                    |                  | _                |                  |           |              |           |             |            |        |              |               |          |              |                    |                  |
|                  |                  |                  |                  |                  |        |                  | •                |                  |                  |                    |                  |                  |                  |                    |                  |                  |                  |           |              |           |             |            |        |              | •             |          |              |                    |                  |
|                  |                  |                  |                  |                  |        |                  |                  |                  |                  |                    |                  |                  |                  | ,                  |                  | • • • •          |                  |           |              |           |             |            |        |              |               |          |              | -                  |                  |
|                  |                  |                  |                  |                  |        |                  |                  |                  |                  |                    |                  |                  |                  |                    |                  |                  |                  |           |              |           |             |            |        |              |               |          |              |                    |                  |
|                  |                  |                  |                  |                  |        |                  |                  |                  |                  |                    |                  |                  |                  |                    |                  |                  |                  |           | -            |           |             |            |        |              |               |          | ••           |                    |                  |
| -                |                  |                  |                  | _                |        |                  |                  |                  |                  |                    | <del></del>      |                  |                  | • .                | <del></del>      |                  |                  |           |              |           |             |            |        |              |               |          |              |                    |                  |
|                  |                  | ٠                |                  |                  |        |                  |                  |                  |                  |                    |                  |                  |                  |                    |                  |                  |                  |           |              |           |             |            |        |              |               |          |              |                    |                  |
| _                |                  |                  |                  |                  |        |                  |                  |                  |                  |                    |                  |                  |                  |                    |                  |                  |                  |           |              |           |             |            |        |              |               |          |              |                    |                  |
|                  |                  |                  |                  |                  |        |                  |                  |                  |                  |                    |                  |                  |                  |                    |                  |                  |                  |           |              |           |             |            |        |              |               |          |              |                    | •                |
|                  |                  |                  |                  |                  |        |                  |                  |                  |                  |                    |                  |                  |                  |                    |                  |                  |                  |           |              |           | _           |            |        |              |               |          |              |                    |                  |

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|---|---|---|
|   | 134934,<br>134934,<br>134934,<br>134934,<br>134934,<br>143100,<br>180072,<br>194190,<br>252800,<br>252800,<br>252800, | 114208,<br>114208,<br>119300,<br>120620,<br>120620,<br>120920,<br>134370,   |
| ,   | 4p16.3  | 1932  |
| H0519: 1, H0689: 1,<br>H0682: 1, H0658: 1,<br>H0710: 1, H0134: 1,<br>H0187: 1, H0627: 1,<br>S0118: 1, S0028: 1,<br>L0754: 1, L0759: 1,<br>S0260: 1, H0445: 1,<br>S0436: 1, S0011: 1,<br>S0194: 1, S0276: 1 and<br>H0008: 1. |   | L0749: 9, L0766: 5,<br>H0659: 5, H0657: 4,<br>S0022: 4, S0438: 3,<br>S0422: 3, L0521: 3,<br>L0518: 3, L0783: 3,<br>H0144: 3, L0758: 3,<br>H0685: 2, H0656: 2, |
|   | Glu-80 to Arg-86.   | Arg-7 to Val-13,<br>Leu-28 to Arg-33,<br>Ser-69 to Gln-76.  |
|   | 2490  | 2491  |
|   | 3 - 356   | 58 - 342  |
|   | 315   | 316   |
|   | 1002479   | 1002492   |
|   | HPTTW90   | HSUBG36   |

| 134370,             | 134370,             | 134580,             | 145260,             | 150310,             | 150310,             | 179820,             | 191045,             | 600105,             | 600759,            | 601494,           | 601975              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| H0341: 2, S0046: 2, | H0393: 2, H0266: 2, | .0520: 2, L0763: 2, | .0770: 2, L0775: 2, | .0657: 2, L0665: 2, | H0547: 2, H0521: 2, | .0747: 2, L0750: 2, | S0446: 2, H0170: 1, | S0040: 1, H0484: 1, | )662: 1, H0402: 1, | 356: 1, S0410: 1, | H0580: 1, H0351: 1, | H0333: 1, L0623: 1, | H0486: 1, H0013: 1, | H0599: 1, S0182: 1, | H0581: 1, T0110: 1, | H0009: 1, L0471: 1, | F0023: 1, L0055: 1, | H0169: 1, H0087: 1, | 70067: 1, H0412: 1, | H0279: 1, H0279: 1, | H0494: 1, H0625: 1, | H0396: 1, H0561: 1, | S0144: 1, L0762: 1, | ,0502: 1, L0648: 1, | .0653: 1, L0655: 1, | .0663: 1, H0701: 1, | H0519: 1, H0682: 1, | H0648: 1, H0710: 1, | S0152: 1, S0136: 1, |
| 0班                  | 0H                  | 071                 | <u>1</u>            | <u></u>             | OH HO               | <u>1</u>            | <u>OS</u>           | SO                  | HO                 | SO                | HO                  | OH HO               | OH                  | 0HI                 | OH HO               | OH H                | <u> </u>            | OH HO               | - 70                | )H                  | OH                  | )H                  | 0S                  | <u>3</u>            |                     |                     | )H                  | )H                  | SO                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     | -                   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                  |                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |

| H0555: 1, S0028: 1,<br>L0755: 1, L0757: 1,<br>S0026: 1, H0136: 1,<br>S0192: 1, H0542: 1,<br>H0543: 1 and H0423: 1. | L0777: 9, L0754: 8,<br>H0615: 5, L0757: 5,<br>S0360: 4, H0031: 4,<br>L0731: 4, H0445: 4,<br>H0438: 3, L0369: 3,<br>L0662: 3, L0766: 3,<br>L0659: 3, S0126: 3,<br>L0747: 3, H0013: 2,<br>H0644: 2, H0628: 2,<br>L0769: 2, L0770: 2,<br>L0769: 2, L0775: 2,<br>L0799: 2, L0778: 2,<br>L0779: 2, L0788: 2,<br>L0779: 2, L0599: 2,<br>L0759: 2, L0599: 2,<br>L0759: 2, L0589: 2,<br>H0423: 2, H0543: 2,<br>H0423: 2, H0543: 1,<br>H0381: 1, L0481: 1,<br>S0358: 1, S0376: 1,<br>H0393: 1, L0717: 1,<br>S0222: 1, H0587: 1,   |
|--|--|
|  | Leu-14 to Asn-32, L0777: 9, L0754: 8 Ala-35 to Gly-40, H0457: 6, H0251: 5, Lys-51 to Ser-56, H0615: 5, L0757: 5, Ala-68 to Leu-78, S0360: 4, H0031: 4, Ile-91 to Lys-99, L0731: 4, H0445: 4, Ile-91 to Lys-152, L0662: 3, L0766: 3, Ser-174 to Asp-181, L0659: 3, S0126: 3, Pro-203 to Leu-215, L0747: 3, H0013: 2, Lys-294 to Gly-301. H0644: 2, H0628: 2, L0769: 2, L0770: 2, L0769: 2, L0776: 2, L0779: 2, L0778: 2, L0779: 2, L0758: 2, L0779: 2, L0758: 2, L0779: 2, L0758: 2, L0779: 2, L0758: 2, L0779: 2, L0758: 2, L0779: 2, L0758: 2, L0779: 2, L0758: 2, L0779: 2, L0758: 2, L0779: 2, L0758: 2, L0779: 2, L0778: 1, H0381: 1, L0481: 1, S0322: 1, H0547: 1, H0393: 1, L0717: 1, R0333: 1, H0647: 1 |
|  | 2492   |
|  | 3 - 1199   |
|  | 317  |
|  | 1002527  |
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| Γ        |        |               |          |                  |          |             |                  |            |                    |                  |          |           | _        |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 | $\neg$            |
|----------|--------|---------------|----------|------------------|----------|-------------|------------------|------------|--------------------|------------------|----------|-----------|----------|------------|---------|-----------|----------|----------|----------|-------------|------------------|------------------|------------------|-----------------------|------------------|------------------|-----------|-----------------|-------------------|
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          | •        |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  | ٠         |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           | -        |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
| ]-j      | 1,     | Ļ             | 1,       | 1,               | 1,       | 1,          | 1,               | 1,         | 1,                 | 1,               | Z.       | Η,        | 1,       | 1          | 1,      | 1,        | 1,       | 1,       | 1,       | 1,          | 1,               | <del>,</del>     |                  | 1,                    | T,               | 1,               | 1,        | -               | 1,                |
| 485:     | T0109: | l, H0036:     | , H0052: | 900              | T0010:   | 1, H0266:   | 169:             | , H0598:   | 150:               | 538:             | 1, UNKWN | l, L0371: | L0764:   | L0389:     | .0655:  | 1, L0783: | L0647:   | L0664:   | H0144:   | , H0547:    | 684              | 670              | 518              | 522:                  | 390:             | 743:             | l, L0751: | 0750: 1, L0756: | .0755: 1, L.0596: |
| , H0485: | .T0    | H             | HOH,     | Ž                | Ĭ,       | HOH,        | , HO             | , HO       | . SO               | HO,              | S        | ,10       | 2        | S          | Š       | 5         | Š        | ğ        | , НО     | , H0        | , HO             | , H0             | , H0             | HO,                   | , SO             | 57               | ,10       | j,              | J.                |
| _        | 6: 1,  | <b>%</b> : 1, | 0: 1,    | 3: 1,            |          | 3: 1,       | ∞<br>1           | 4: 1       | 1:1                | 4: 1,            | 2: 1,    | 9: 1      |          | 0649: 1, ] | 4: 1,   | 6: 1,     | 9: 1,    | 3: 1,    | 5: 1.    | 2: 1        | 9: 1             | 5: 1             | 2:1              | 2: 1,                 | 5: 1             | 7: 1             | 0:1       | 0:1             | 5: 1              |
| H0632:   | H0486: | H0098: 1      | H0390: 1 | 10263: 1, N0006: | H0050:   | H0083: 1    | H0328: 1, H0169: | H0674:     | H0561: 1, S0150: 1 | S0344: 1, H0538: | S0422:   | H0529:    | .0646: 1 | 28         | 0804: 1 | .0606: 1  | .0809: 1 | .0663:   | .0665: 1 | .0352: 1    | 10519: 1, H0684: | H0435: 1, H0670: | H0672: 1, H0518: | S0152: 1, H0522:      | H0555: 1, S0390: | S0037: 1, L0743: | .0740:    | 075             | 275               |
| 严        | Ξ.     | Ξ.            | <u> </u> | <u> </u>         | <u> </u> | <u>;11;</u> | <u> </u>         | <u>:4:</u> | <u>;11;</u>        | <u> </u>         | S        | بكز       |          | <u> </u>   |         | <u> </u>  | إجسور    | <u> </u> | Н        | <del></del> | <u> </u>         | <u> </u>         | <u> </u>         | <i>O</i> <sub>2</sub> | پير              | <u>(7)</u>       | <u> </u>  | <u>} </u>       |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             | •                |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            | ٠                  | `                |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
| İ        |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
| $\vdash$ |        |               |          |                  |          |             |                  | _          |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          | •        |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
| ┢        |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    | ,                |          |           |          |            |         |           |          | •        |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
| _        |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       | •                |                  |           | -               |                   |
| L        |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          | •          |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  | ,                |                  |                       |                  |                  |           |                 |                   |
| -        |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          | •          |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           | · <u> </u>      |                   |
|          |        | •             |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
|          |        |               |          |                  |          |             |                  |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  |                  |           |                 |                   |
| L        |        |               |          |                  |          |             | _                |            |                    |                  |          |           |          |            |         |           |          |          |          |             |                  |                  |                  |                       |                  | •                |           |                 |                   |

|                     |                     |                     |                        |                   |                 |                   |                     | -                   |                     |   | <u>.</u>                        |                     |                     |                     | _                   | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |
|---------------------|---------------------|---------------------|------------------------|-------------------|-----------------|-------------------|---------------------|---------------------|---------------------|---|---------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                        |                   |                 |                   |                     |                     |                     |   |                                 |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     | , <del>-</del>      |                     |                     |                     |                     |                     |
| .0605: 1, L0590: 1, | .0591: 1, L0593: 1, | S0026: 1, S0242: 1, | S0276: 1 and H0422: 1. |                   | H0615: 2        |                   | H0040: 6, H0013: 3, | S0136: 3, L0777: 3, | H0542: 3, H0171: 2, | H0581: 2, H0328: 2,                     | H0615: 2, L0662: 2,             | H0144: 2, L0731: 2, | H0624: 1, H0170: 1, | H0556: 1, S0282: 1, | H0661: 1, H0176: 1, | H0402: 1, S0354: 1, | S0360: 1, H0393: 1, | S6014: 1, H0574: 1, | H0427: 1, H0575: 1, | L0157: 1, S0003: 1, | H0553: 1, H0090: 1, | H0591: 1, T0067: 1, | H0264: 1, H0412: 1, | F0041: 1, H0494: 1, | H0646: 1, S0002: 1, | L0646: 1, L0642: 1, | L0645: 1, L0651: 1, | L0655: 1, L0659: 1, | L0791: 1, L0666: 1, |
|                     | <u> </u>            | <u>o</u>            | 3                      | Ser-80 to Gln-98. | Thr-2 to Ser-9, | Pro-23 to Glu-34. | Ser-30 to Lys-46,   | Leu-55 to Gly-67, S |                     | Glu-146 to Arg-155, H0581: 2, H0328: 2, | Asn-182 to Arg-192. H0615: 2, I | )                   | <del></del>         |                     |                     |                     | <u> </u>            | <u> </u>            | - F                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | 2493              | 2494            |                   | 2495                |                     |                     |   |                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | 20 - 826          | 2 - 121         |                   | 195 - 1556          |                     |                     |   |                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠.                  |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | 318               | 319             |                   | 320                 |                     |                     |   |                                 |                     |                     |                     |                     |                     |                     |                     | · (                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | 1002545           | 1002546         | ,                 | 1002551             |                     |                     |   |                                 |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | •                      | HCNSF57           | HODJU13         |                   | HODIL25             |                     |                     |   |                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                     |                     |                     |                     |                     |                        |                     |                     |                     | •                   |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     | • |                        |           |                        |
|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---|------------------------|-----------|------------------------|
| H0520: 1, H0547: 1, | H0519: 1, H0689: 1, | H0659: 1, H0521: 1, | H0696: 1, L0747: 1, | L0758: 1, S0192: 1, | S0242: 1 and H0422: 1. | L0803: 4, L0793: 4, | L0749: 4, L0438: 3, | L0439: 3, S0420: 2, | H0485: 2, H0038: 2, | H0561: 2, L0804: 2, | L0747: 2, L0779: 2, | L0591: 2, H0265: 1, | H0556: 1, S0418: 1, | H0728: 1, H0208: 1, | H0619: 1, S0278: 1, | H0486: 1, H0244: 1, | H0052: 1, S0366: 1, | H0598: 1, H0623: 1, | L0640: 1, L0364: 1, | L0774: 1, L0776: 1, | L0807: 1, L0659: 1, | L0809: 1, L0791: 1, | S0374: 1, H0520: 1, | , | H0522: 1, S3014: 1, |   | H0445: 1, S0436: 1 and | L0599: 1. | H0644: 4, S0036: 1 and |
|                     | •                   |                     |                     |                     |                        | Gln-34 to Pro-41,   | Lys-60 to Thr-71,   | Val-78 to Gln-86,   | His-139 to Tyr-149, | Arg-183 to His-191. |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |   |                     |   |                        |           | Gln-29 to Gln-42.      |
|                     |                     |                     |                     |                     |                        | 2496                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |   |                        |           | 2497                   |
|                     |                     |                     |                     | -                   |                        | 162 - 791           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |   |                        | :         | 392 - 823              |
|                     |                     |                     |                     |                     |                        | 321                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |   |                        |           | 322                    |
|                     |                     |                     |                     |                     |                        | 1002563             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |   |                        |           | 1002565                |
|                     |                     |                     |                     |                     | ,                      | HUVHS56             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | • |                     |   |                        |           | HPMJQ18                |

|           |   | ٠.                                     |                     |   |   |   | _                                       |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                        |           | <u>.</u>          |                   |                     |                     |                     |                     |                     |                     |                     |
|-----------|---|--|---------------------|---|---|---|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|-------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| -         |   |  |                     |   |   |   |   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                        |           |                   | <del></del>       |                     |                     | -                   |                     |                     |                     | _                   |
|           |   |  |                     |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                   |                   |                     |                     |                     |                     |                     |                     |                     |
| H0521: 1. | L0591: 15, L0751: 13,<br>L0665: 11, L0754: 9, | H0689: 6, L0750: 6,                    | H0617: 3, L0774: 3, | L0657: 3, H0658: 3,                     | H0575: 2, H0615: 2,                     | H0059: 2, H0690: 2,                     | H0660: 2, S0328: 2,                     | S0330: 2, L0743: 2, | L0756: 2, L0755: 2, | H0671: 1, H0282: 1, | H0024: 1, T0006: 1, | H0644: 1, H0647: 1, | L0769: 1, L0662: 1, | L0803: 1, L0806: 1, | L0783: 1, L0809: 1, | L0664: 1, H0682: 1, | L0748: 1, L0596: 1 and | L0599: 1. |                   |                   |                     |                     |                     |                     |                     |                     |                     |
|           | Glu-1 to Asp-13,<br>His-55 to Leu-66,         | Gln-69 to Cys-79,<br>Thr-81 to A sn-90 | H,                  | Asp-158 to Trp-169, L0657: 3, H0658: 3, | Lys-171 to Asn-180, H0575: 2, H0615: 2, | His-208 to Arg-221, H0059: 2, H0690: 2, | Pro-229 to Glu-237. H0660: 2, S0328: 2, |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                        |           | Arg-12 to Arg-19, | His-62 to Leu-73, | Ser-103 to Thr-111, | Asn-147 to Val-158, | Phe-207 to Trp-213, | Lys-243 to Lys-276, | Ala-281 to Cys-289, | Pro-297 to Pro-302, | Glu-315 to Asp-324, |
|           | 2498  | •                                      |                     |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2499              |                   |                     |                     |                     |                     |                     | ,                   |                     |
|           | 114 - 923                                     | ٠.                                     |                     |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 29 - 1408         |                   |                     |                     |                     |                     |                     |                     |                     |
|           | 323   |  |                     |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                      |           | 324               |                   |                     |                     |                     |                     |                     |                     |                     |
|           | 1002591                                       |  |                     |   |   | -                                       | ,                                       |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                        |           | 1002607           |                   |                     |                     |                     |                     |                     | .,                  |                     |
|           | HLHCI46                                       |  |                     |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HAOSD18           |                   |                     |                     |                     |                     |                     |                     |                     |

|                     | ,                   |                     | ,               |                       |   |   |                       |                       |                       | <del></del>           |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|-----------------|-----------------------|---|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                 | 19q                   |   |   |                       |                       |                       |                       |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                 | H0341: 33, S0126: 19, | Asp-128 to Phe-137, L0471: 17, H0087: 17, | 10659: 17, H0670: 17,                   | H0333: 14, H0024: 14, | H0685: 13, S0114: 13, | S0358: 13, H0648: 13, | S0046: 12, L0742: 12, | .0588: 12, S0278: 11, | H0594: 11, H0352: 11, | S0134: 10, L0748: 10, | S0116: 9, H0620: 9, | .0754: 9, L0750: 9, | H0422: 9, H0255: 8, | S0007: 8, S0132: 8, | H0318: 8, H0081: 8, | H0012: 8, H0083: 8, | S3012: 8, S3014: 8, | H0543: 8, H0265: 7, | H0009: 7, H0039: 7, | S0027: 7, S0028: 7, | H0295: 6, H0657: 6, | L0622: 6, L0540: 6, | H0436: 6, H0576: 6, | H0624: 5, S0360: 5, | H0351: 5, L0623: 5, | H0069: 5, H0530: 5, |
| His-336 to Trp-342, | Arg-371 to Lys-377, | Asp-416 to Thr-432. | Pro-1 to Lys-7. | Val-105 to Ile-113,   | Asp-128 to Phe-137, I                     | Arg-145 to Arg-151. H0659: 17, H0670: 1 | )                     | <u> </u>              | <u> </u>              | <u> </u>              |                       |                       | <u> </u>              |                     |                     |                     |                     | #                   | H-1                 | <u> </u>            | <b>H</b>            |                     | <u>Uj</u>           |                     |                     |                     |                     | #                   | I                   |
|                     |                     |                     | 2500            | 2501                  |   |   |                       |                       |                       |                       |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ı                   |                     |                     |                     |                     |
|                     |                     |                     | 2 - 361         | 229 - 681             |   |   |                       |                       |                       |                       |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | 325             | 326                   |   |   |                       |                       |                       |                       |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |
|                     |                     |                     | 1002610         | 1002729               |   | -                                       |                       |                       |                       |                       |                       | ,                     |                       | ,                   |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | HACNG47         | HOPJX95               |   |   |                       |                       | ,                     |                       |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |

|   |                     |                    |                     |                      |                     |      |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                    | ÷                   |                    |                    |                     |                  |                     |                     |                    |                    |                     |                  |
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| 4: 5. 5. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. | Σ, .                | 13: 5,             | 0:5,                | 6: 5,                | 10666: 5, H0672: 5, | 0:5, | 4: 5,               | H0686: 4, H0306: 4, | H0559: 4, H0597: 4, | 4.4                 | 7:4,                | 15: 4,             | 56: 3,              | 4:3,                | 6: 3,               | 86: 3,             | 0:3,                | 27: 3,             | H0041: 3, H0252: 3, | 58: 3,             | 16:3,              | t1: 3,              | 33: 3,           | 6:3,                | 9.3,                | 37: 3,             | <del>1</del> 3: 3, | H0542: 3, H0170: 2, | 59: 2,           |
| H001  | H0687: 5, H0040: 5, | H0412: 5, H0413: 5 | H0059: 5, H0100: 5, | .0521: 5, L.0526: 5, | H067                | S038 | H0134: 5, L0604: 5, | H03(                | H059                | H0266: 4, L0764: 4, | S0044: 4, L0777: 4, | J0731: 4, H0445: 4 | H0423: 4, H0556: 3, | S0040: 3, H0294: 3, | H0402: 3, S0376: 3, | H0392: 3, H0486: 3 | Γ0040: 3, S0280: 3, | H0581: 3, H0327: 3 | H02                 | H0032: 3, H0068: 3 | H0135: 3, H0616: 3 | H0063: 3, T0041: 3, | H0561: 3, H0633: | .0767: 3, L0776: 3, | .0783: 3, L0809: 3, | H0684: 3, S0037: 3 | .0747: 3, H0343: 3 | H01                 | F0002: 2, H0159: |
| 3: 2  | 7:5,                | 2: 5,              | 9:5,                | 1:5,]                | 6:5,                | 1:5, | 4: 5,               | 6:4,                | 9:4,                | 6:4,                | 4.4                 | 1:4,               | 3:4,                | 0:3,                | 2: 3,               | 2: 3,              | 0:3,                | 1: 3,              | :1: 3,              | 2:3,               | 5:3,               | 3:3,                | 1:3,             | 7:3,                | 3: 3,               | 3,                 | 7:3,               | 12: 3,              | 2:2              |
| H0123: 5, H0014: 5,                             | 1068<br>1068        | H041               | H005                | L052                 | 990H                | H065 | H013                | H068                | H055                | H026                | <b>S004</b>         | L073               | H042                | S004                | H040                | H039               | <b>T004</b>         | H058               | H004                | H003               | H013               | H006                | H056             | 1.076               | L078                | H068               | L074               | H054                | T000             |
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| S0218: 2, S0212: 2, | H0305: 2, H0459: 2, | H0125: 2, H0637: 2, | S0045: 2, H0369: 2, | H0370: 2, H0574: 2, | H0492: 2, H0101: 2, | H0013: 2, H0421: 2, | H0231: 2, H0046: 2, | H0457: 2, H0051: 2, | H0354: 2, H0099: 2, | H0188: 2, H0292: 2, | H0284: 2, H0286: 2, | S0022: 2, S0214: 2, | H0428: 2, H0031: 2, | H0553: 2, L0142: 2, | H0617: 2, H0124: 2, | S0036: 2, H0038: 2, | T0042: 2; S0016: 2, | H0359: 2, H0625: 2, | L0065: 2, H0509: 2, | H0646: 2, S0144: 2, | H0529: 2, L0520: 2, | L0762: 2, L0770: 2, | L0768: 2, L0775: 2, | L0655: 2, L0542: 2, | L0384: 2, L0545: 2, | L0530: 2, L0666: 2, | H0689: 2, S0330: 2, | L0740: 2, L0751: 2, | L0786: 2, L0755: 2, |
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| .0757; 2, H0444; 2, .0596; 2, L0591; 2, .0361; 2, .0603; 2 | 30011: 2, H0668: 2,<br>H0008: 2, H0171: 1 | H0222: 1, S0402: 1,                   | .0785: 1, 50001: 1, | 10669: 1, H0663: 1 | T0664: 1, S0420: | H0675: 1, S0408: | H0580: 1, H0152:<br>H0208: 1 H0393: | H0411: 1, H0431: | H0438: 1, H0600: | 10497: 1, H0491: | H0490: 1, T0060: | 70109: 1, H0250: | H0635: 1, H0599: | H0108: 1, H0575: | H0004: 1, S0182: | S0049: 1, H0052: | 10309: 1, H0204: | F0115: 1, T0110: | H0546: 1, H0545: | H0086: 1, H0050: | H0350: 1, T0003: | H0578: 1, H0015: | H0373: 1, S0051: 1 | H0078: 1, S0336: |
| 322  | 3 S H                                     | OH.                                   | <u> </u>            | 0H .               | HO               | )H               | HC                                  | H                | H                | H                | HC               | <u>17</u>        | H                | H                | H                | <u>S</u>         | H                | <u>51</u>        | H                | H                | H                | )H               | H                  | H                |
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| H0290: 1, S0003: | H0535: 1, H0622: | F0006: 1, H0604: | H0030: 1, H0644: | .0143: 1, H0113: | S0366: 1, H0316: | H0533: 1, H0634: | H0116: 1, H0269: | H0079: 1, S0038: | H0494: 1, S0150: | H0130: 1, H0647: 1, | H0649: 1, H0281: 1 | S0142: 1, S0210: | S0422: 1, L0763: | 631:     | L0796:  | .0761: 1, L0646: | .0662: 1, L0364: | L0803:        | .0650: 1, L0378: | L0379:      | .0527: 1, L0657: | L0559:   | .0659: 1, L0518: | L0529:      | 1, L0665: | S0052: 1, S0428: 1 | H0682: 1, H0435: | H0660: 1, S0378: 1 | H0518: 1, S0454: |
| 1, S0            | 1, HC            | 1, HO            | 1, HC            | 1, H0            | l, HO            | 1, HC            | 1, HC            | 1, S0            | 1, S0            | 1,440               | 1, H(              | 1, 50            | 1, LO            | 1,10     | 1, 10   | $1, \Gamma 0$    | 1, LO            |               | 1, LO            | Ė           | 1, LO            | 1,10     | 1, 10            | 1, 10       | 1,10      | 1, S0              | 1, H(            | 1, SC              | 1, SC            |
| :067             | 535:             | 906:             | 030:             | 43:              | 366: ]           | 533:             | 116:             | 079:             | 494:             | 130:                | 649:               | 42:              | 122:             | 371:     | 0769: 1 | 761:             | 562:             | .0381: 1      | 550:             | L0653: 1    | 527:             | .0512: ] | 559:             | .0782: 1, ] | .0532: 1  | 352:               | 682:             | .099               | 518:             |
| H0.              | <u>Ř</u>         | <u> </u>         | Ŏ<br>H           | 3                | S03              | <u>H</u>         | H                | <u>H</u>         | ĎH               | H<br>H              | Ŭ<br>H             | S0.              | 80               | <u>S</u> | 2       | 0                | <u>Š</u>         | 9             | Š                | <u>Š</u>    | Š                | <u> </u> | <u>Š</u>         | <u>6</u>    | <u> </u>  | 20                 | E                | H                  | H<br>H           |
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|   |  | 113100,<br>124200,<br>147440,<br>158590,<br>160781,<br>163950,<br>163950,<br>235800,<br>251170,<br>276710,<br>600175,  |
| ÷   |  | 12q23-q24  |
| H0521: 1, S0118: 1,<br>L0752: 1, L0753: 1,<br>L0759: 1, H0595: 1,<br>L0587: 1, L0589: 1,<br>L0605: 1, L0599: 1,<br>S0026: 1, H0653: 1,<br>H0217: 1, S0194: 1,<br>S0424: 1, S3018: 1,<br>S0384: 1, S0446: 1 and<br>H0293: 1. | Ĺ0748: 3, H0486: 1,<br>H0428: 1, H0034: 1,<br>H0690: 1, H0435: 1,<br>H0658: 1, H0653: 1 and<br>L0465: 1. | Pro-107 to Gly-118, L0777: 17, L0766: 11, Gly-128 to Ser-140, S0360: 10, L0748: 10, Asp-148 to Glu-166, H0620: 8, H0124: 8, Ala-173 to Ala-186, L0770: 8, H0295: 7, Arg-196 to Ala-210, S0408: 7, S0046: 6, Ile-219 to Trp-228, L0775: 6, L0659: 6, L074: 6, L0595: 6, L074: 6, L0595: 6, L076: 5, L076: 5, L066: 5, L076: 5, L066: 5, L076: 5, L066: 5, L076: 5, L066: 5, L076: 5, L065: 6, H0484: 4, S0358: 4, H0484: 4, S0358: 4, H0559: 4, H0559: 4, H0559: 4, H0559: 4, H0573: 4, H0559: 4, H0673: 4, H0559: 4, H0673: 4, H0559: 4, H0673: 4, H0559: 4, H0673: 4, H0559: 4, H0673: 4, H0559: 4, H0673: 4, H0559: 4, H0673: 4, H0559: 4, H0673: 4, H0559: 4, H0573: 4, H0559: 4, H0673: 4, H0559: 4, H0559: 4, H0673: 4, H0559 |
|   | Lys-1 to Asn-10,<br>Phe-40 to Gly-55,<br>Asn-61 to Arg-66.   | Pro-107 to Gly-118, L0777: 17, L0766: Gly-128 to Ser-140, S0360: 10, L0748: 1 Asp-148 to Glu-166, H0620: 8, H0124: 8, Ala-173 to Ala-186, L0770: 8, H0295: 7, Arg-196 to Ala-210, S0408: 7, S0046: 6, Ile-219 to Trp-228, L0775: 6, L0659: 6, Asn-238 to Met-S0278: 5, S0440: 5, L0769: 5, L0665: 5, L0657: 6, L0657: 5, L0666: 5, L0657: 5, L0657: 5, L0657: 5, L0657: 4, H0484: 4, S0358: 4, H0559: 4, H05 |
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| H0100: 4, L0637: 4, | L0665: 4, H0144: 4, | S0126: 4, L0754: 4, | L0747: 4, L0758: 4, | L0599: 4, H0624: 3, | H0341: 3, S0442: 3, | H0550: 3, H0599: 3, | H0012: 3, H0644: 3, | H0087: 3, H0551: 3, | S0144: 3, L0763: 3, | L0646: 3, L0662: 3, | L0794: 3, L0774: 3, | L0776: 3, L0664: 3, | H0648: 3, H0672: 3, | H0521: 3, S0406: 3, | S3012: 3, S0028: 3, | L0740: 3, L0751: 3, | H0445: 3, H0665: 3, | H0542: 3, H0543: 3, | T0049: 2, H0657: 2, | H0661: 2, H0664: 2, | S0420: 2, H0618: 2, | S0010: 2, H0544: 2, | H0178: 2, H0024: 2, | H0083: 2, H0510: 2, | H0428: 2, H0622: 2, | H0031: 2, H0617: 2, | H0616: 2, H0063: 2, | H0433: 2, H0413: 2, | H0494: 2, H0560: 2, |
|                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     |                    |                     |                     |                     |                     |           |                     |                      |                     | _                   |                     |             |                     |                    |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                 |
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|                     |                    |                     |                     |                     |                     |           |                     |                      |                     |                     |                     |             |                     |                    |                    |                  |                  |                  |                  |                  |                  |                  | _                |                  |                  |                  |                  |                  |                 |
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| 3: 2,               | 8: 2,              | 9:2,                | 7:2,                | 0:2,                | 4: 2,               | 6: 2,     | 9.2,                | 2:2,                 | 9.2,                | 4.2,                | 0:2,                | .0604: 2,   | 1:2,                | 70: 1              | 55: 1              | 0:1,             | 5: 1,            | 2: 1,            | 5: 1             | 8: 1             | 6: 1,            | 7: 1,            | 59: 1            | 70: 1            | 87: 1            | 4: 1             | 50:1             | 56: 1            | 4.1             |
| 8                   | .037               | 88                  | 1054                | S033                | S301                | S0206: 2, | L074                | 2075                 | L075                | 140E                | L059                | 0907        | 1036                | H01'               | H02                | <b>S004</b>      | 1078             | 3021             | H025             | <b>S04</b> 1     | 3037             | 507              | H03              | H03              | H05              | T011             | H02              | H01              | 0021: 1, H0004: |
| 2, 1                | : 2, ]             | : 2,]               | : 2, ]              | 2,                  | 2,                  | 2,5       | .,2                 | 2,                   |                     | 2,1                 | 2,                  | . 2,        | 2,                  | 2,                 | l: 1,              | 1,               | : 1,]            | 1,               | : 1,]            | <b>3</b> : 1,    |                  | : 1,             | I: 1,            | l: 1,            | 5: 1,            | . <u>1</u>       | 3: 1,            | . 1,             | i: 1,           |
| .0764: 2, L0803: 2, | 0651: 2, L0378: 2, | ,0806: 2, L0809: 2, | ,0663: 2, H0547: 2, | 10658: 2, S0330: 2, | H0696: 2, S3014: 2, | 50027: 2, | .0742: 2, L0749: 2, | .0750: 2, L.0752: 2, | .0757: 2, L0759: 2, | S0260: 2, H0444: 2, | .0596: 2, L0590: 2, | .0592: 2, I | .0362: 2, L0361: 2, | H0667: 2, H0170: 1 | H0171: 1, H0265: 1 | T0002: 1, S0040: | S0134: 1, L0785: | S0116: 1, S0212: | S0001: 1, H0255: | H0663: 1, S0418: | S0356: 1, S0376: | S0444: 1, L0717: | H0411: 1, H0369: | H0431: 1, H0370: | H0455: 1, H0587: | F0039: 1, T0114: | H0013: 1, H0250: | S0280: 1, H0156: | 002             |
| 1                   | ı                  | <u> </u>            | 7                   | 王                   | 王                   | <u>N</u>  | 7                   | <u> </u>             | 그                   | <u> </u>            | 그                   | 그           | 그                   | 王                  | Ξ                  | H                | Ŋ                | S                | Ś                | 正                | Ś                | Ś                | <u> </u>         | <u> </u>         | <u> </u>         | <u></u>          | _=               | S                | <u></u>         |
|                     |                    |                     |                     |                     |                     |           |                     |                      |                     |                     |                     |             |                     |                    |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                 |
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| $\vdash$            | -                  |                     |                     |                     |                     |           |                     |                      |                     |                     |                     |             |                     |                    |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                 |
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| Г                   |                    |                     |                     |                     |                     |           |                     |                      |                     |                     |                     | _           |                     |                    |                    | ,                |                  |                  |                  |                  | ,                |                  |                  |                  |                  |                  |                  |                  |                 |
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|                     |                    |                     |                     |                     |                     |           | •                   | •                    |                     |                     |                     |             |                     |                    |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                 |
| <u>L</u>            |                    |                     |                     |                     |                     |           |                     | •                    |                     |                     |                     |             |                     |                    |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                 |

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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     | <del></del>         | <del></del>         |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0318: 1, S0474: 1. | H0196: 1, H0251: 1, | H0085: 1, H0204: 1, | 10596: 1, H0597: 1, | H0327: 1, H0546: 1, | 10086: 1, H0081: 1, | H0050: 1, H0373: 1, | S0051: 1, T0010: 1, | 10375: 1, S6028: 1, | 10271: 1, S0334: 1, | H0284: 1, S0250: 1, | 0003: 1, S0214: 1, | H0328: 1, H0213: 1, | H0628: 1, H0169: 1, | 10674: 1, S0366: 1, | 10316: 1, H0598: 1, | H0163: 1, H0591: 1, | H0038: 1, H0056: 1, | 10561: 1, S0464: 1, | S0466: 1, S0150: 1, | S0142: 1, S0426: 1, | 10529: 1, L0772: 1, | .0373: 1, L0372: 1, | .0771: 1, L0363: 1, | .0768: 1, L0649: 1, | .0804: 1, L0650: 1, | .0375: 1, L0784: 1, | .0658: 1, L0635: 1, | .0542: 1, L0526: 1, | .0518: 1, L0519: 1, |
|                     |                     | <u> </u>            |                     | <u>E</u>            | 正                   | <u> </u>            | S                   | <u> </u>            | <u> </u>            |                     | S                  | <u> </u>            | <u> </u>            | <del>, 111</del>    |                     |                     | <u> </u>            | <u>.</u>            | S                   | S                   | <u>Hi</u>           |                     | <u></u>             |                     |                     |                     | <u>.</u>            | 1                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |
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|  |                     | ٠.                  |                     | ,                   |                    |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                        | 41,                   | · <b>'</b> 00       | 20,                 | ģ                                       | <del>6</del> ,      | 91,                 | ,00                 | 31,                | 90,        | ,00                 | 50,                 | 01,                 | 01,                 |
|  |                     | . ,                 |                     |                     |                    | _                   |                     |                     |                     |                     |                     |                     | ,                   |                     |                        | 107741                | 113900,             | 122720,             | 122720,                                 | 126340,             | 126391              | 160900,             | 164731,            | 172400     | 172400,             | 173850,             | 180901              | 180901              |
|  |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                        | 19q13.1-              | q13.2               | ı                   |   |                     |                     |                     |                    |            |                     |                     |                     |                     |
| L0529: 1, L0647: 1,<br>S0428: 1, H0698: 1. | H0702: 1, L0565: 1, | H0520: 1, H0690: 1, | 10682: 1, H0684: 1, | H0659: 1, H0670: 1, | j,                 | S0378: 1, S0380: 1, | H0709: 1, S0044: 1, | S0404: 1, H0436: 1, | 10576: 1, S0037: 1, | .0741: 1, L0755: 1, | S0434: 1, L0597: 1, | .0589: 1, L0608: 1, | .0366: 1, S0026: 1, | S0194: 1, S0276: 1, | H0423: 1 and H0352: 1. | L0777: 14, L0748: 11, | J0747: 7, L0752: 7, | H0295: 6, L0769: 6, | L0749: 4, L0755: 4,                     | H0341: 3, H0580: 3, | HO581: 3, H0529: 3, | ,0770: 3, L0751: 3, | 0750: 3, L0756: 3, | _          | .0615: 2, S0116: 2, | 10402: 2, S0132: 2, | H0575: 2, H0253: 2, | H0309: 2, H0081: 2, |
| L05<br>S04                                 | H07                 | H05                 | H06                 | H06                 | S03                | S03                 | H07                 | S04                 | HOS                 | 1.07                | <u>S</u> 04         | 105                 | F03                 | S01                 | H07                    | Г                     | <u> </u>            |                     | _                                       | ĺ                   | HO                  | 107                 | 107                | <u>100</u> | 707                 | H07                 | HO;                 | HO                  |
|  |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Asp-45 to Pro-56,     | Thr-86 to Ser-91,   | Pro-127 to Arg-133, | Asp-201 to Gln-215.                     | •                   |                     |                     |                    |            |                     |                     |                     |                     |
|  |                     |                     |                     |                     | <del>- 100-1</del> |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                      | 2504                  |                     |                     |   |                     |                     |                     |                    |            |                     |                     |                     |                     |
|  |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 199 - 843             |                     |                     | *************************************** |                     |                     |                     |                    |            |                     |                     |                     |                     |
|  |                     | •                   |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 329                   |                     |                     |   |                     |                     |                     |                    |            |                     |                     |                     |                     |
|  |                     |                     |                     |                     |                    |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        | 1003126               |                     |                     |   |                     |                     |                     |                    |            |                     |                     |                     |                     |
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| 207750,             | 221770,             | 248600,             | 258501,      | 600918,             | 602716        |                  |                  |                  |              |                  |                  |                  |                  |                  |              |                  |             |              |             |             |                  |             |                  |               |                  |             |           |             |             |
|                     |                     |                     |              |                     |               |                  |                  |                  |              |                  |                  |                  |                  |                  |              |                  |             |              |             |             |                  |             |                  |               | ,                |             |           |             |             |
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| 0031: 2,            | 0494: 2,            | 763: 2,             | L0766: 2,    | 759: 2,             | L0591: 2,     | 0395: 1,         | )484: 1,         | 358: 1,          | 3637: 1,     | 0550: 1,         | 0574: 1,         | 0101: 1,         | 0036: 1,         | 0049: 1,         | H0041: 1,    | 0050: 1,         | H0023: 1,   | 1, H0252: 1, | L0142: 1,   | , S0364: 1, | 0551: 1,         | H0560: 1,   | 0561: 1,         | l, H0646: 1,  | 3772: 1,         | L0374: 1,   | .0773: 1, | L0768: 1,   | .0775: 1,   |
| H0012: 2, H0031: 2, | H0087: 2, H0494: 2, | S0344: 2, L0763: 2, | .0764: 2, L( | .0368: 2, L0759: 2, | .0588: 2, LO  | H0170: 1, H0395: | S0040: 1, H0484: | H0306: 1, S0358: | 30360: 1, Hi | S0278: 1, H0550: | H0249: 1, H0574: | .0623: 1, H0101: | H0013: 1, H0036: | 10421: 1, S0049: | 10545: 1, H  | H0009: 1, H0050: | H0620: 1, H | H0083: 1, H  | H0039: 1, L | H0617: 1, S | H0135: 1, H0551: | H0412: 1, H | H0625: 1, H0561: | S0150: 1, H   | S0142: 1, L0772: | .0372: 1, L |           | .0662: 1, L | .0389: 1, L |
|                     | <u>,,,,</u>         | <u> </u>            |              | <u> </u>            |               | <u>щ</u>         | <u>(0)</u>       | <u> </u>         | <u>(V)</u>   | روي              |                  | _ <u>=</u>       | <u> </u>         | <u> </u>         | <u>, = 1</u> | <u>,</u>         |             |              |             |             | <u>. 11</u>      | <u> </u>    |                  | <u> </u>      | <u>Uj</u>        |             |           |             |             |
|                     | •                   |                     |              |                     |               |                  |                  |                  |              |                  |                  |                  |                  |                  |              |                  |             |              |             |             |                  |             |                  |               |                  |             |           |             |             |
|                     |                     |                     |              |                     |               |                  |                  |                  |              |                  |                  |                  |                  |                  |              |                  |             |              |             |             |                  |             |                  |               |                  |             |           |             |             |
|                     |                     |                     |              |                     | <del>,-</del> |                  |                  |                  |              |                  |                  |                  |                  |                  |              |                  |             | 7            | _           |             |                  |             |                  |               |                  |             |           |             |             |
| -                   |                     |                     |              |                     |               |                  |                  |                  |              |                  |                  |                  |                  |                  | . •          |                  |             |              |             |             |                  | ·<br>       |                  |               |                  |             |           |             |             |
|                     | •                   |                     | •            |                     |               |                  |                  |                  |              |                  |                  |                  |                  |                  |              |                  |             |              |             |             |                  |             |                  |               |                  |             |           |             |             |
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|                     |                     |                     |              |                     | <del></del>   |                  | •                |                  |              |                  | 3                |                  |                  |                  |              |                  |             |              |             |             |                  |             |                  |               |                  |             |           |             |             |
|                     |                     |                     |              |                     |               |                  |                  |                  |              |                  |                  |                  |                  |                  |              |                  |             |              |             |             |                  |             |                  |               |                  |             |           |             |             |

|   | 120550,<br>120570,<br>120575,<br>121800,<br>130500,<br>133200,<br>13140,<br>171760,<br>171760,<br>255800   |                     |
|---|--|---------------------|
|   | 1p34.2   | :                   |
| L0376: 1, L0783: 1,<br>L0532: 1, L0666: 1,<br>L0665: 1, H0689: 1,<br>H0670: 1, H0660: 1,<br>H0648: 1, H0672: 1,<br>S0330: 1, H0521: 1,<br>S0044: 1, H0134: 1,<br>S0027: 1, L0740: 1,<br>L0731: 1, H0445: 1, | L0740: 11, L0751: 11, L0731: 7, L0731: 7, L0758: 7, H0659: 6, H0672: 6, L0748: 6, L0759: 6, H0251: 5, H0441: 4, L0766: 4, L0806: 4, S0040: 3, H0551: 3, L0774: 3, L0775: 3, L0754: 3, L0775: 3, L0755: 2, L0083: 2, L008 | S0214: 2, H0617: 2, |
| <u> </u>  | Lys-75 to Lys-80, Leu-138 to Tyr-144, Tyr-153 to Pro-159.  |                     |
|   | 2505   |                     |
|   | 185 - 925  |                     |
|   | 330  | ,                   |
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|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|---------------------|------------------|---------------------|---------------------|--------------------|------------------|------------|---------------------|------------|------------------|---------------|------------------|------------------|------------------|------------------|------------|------------------|------------------|------------------|------------------|------------------|-------------|------------------|------------------|
|                     |                     |                    |                    |                    | •                  |                     | <del></del>      |                     |                     |                    |                  |            |                     |            |                  | •             |                  |                  |                  |                  |            | -·· ·            |                  |                  |                  |                  |             |                  |                  |
|                     |                     |                    |                    |                    |                    |                     |                  |                     |                     |                    |                  |            |                     |            |                  |               |                  |                  |                  |                  |            |                  |                  |                  |                  |                  | •           |                  |                  |
| 087: 2,             | 494: 2,             | 771: 2,            | 767: 2,            | 549: 2,            | 529: 2,            | 144: 2,             | 593: 2,          | 027: 2,             | 589: 2,             | 361: 2,            | 149: 1,          | 002: 1,    | )49: 1,             | 663: 1,    | 125: 1,          | S0045: 1,     | 717: 1,          | 411: 1,          | 587: 1,          | 643: 1,          | 427: 1,    | 182: 1,          | 123: 1,          | 316: 1,          | 644: 1,          | 090: 1,          | T0041: 1,   | 561: 1,          | 647: 1,          |
| H0606: 2, H0087: 2, | H0059: 2, H0494: 2, | 0764: 2, L0771: 2, | 0662: 2, L0767: 2, | 0768: 2, L0649: 2, | 0375: 2, L0529: 2, | ,0665: 2, H0144: 2, | H0519: 2, H0593: | H0631: 2, S0027: 2, | .0749: 2, L0589: 2, | .0605: 2, L0361: 2 | .0603: 2, H0149: | 265: 1, TO | S0114: 1, T0049: 1, | 657: 1, H0 | H0638: 1, H0125: | S0356: 1, S00 | S0132: 1, L0717: | H0351: 1, H0411: | H0586: 1, H0587: | H0497: 1, H0643: | 240: 1, H0 | S0665: 1, S0182: | H0150: 1, H0123: | H0081: 1, S0316: | r0006: 1, H0644: | S0036: 1, H0090: | 0067: 1, TO | .0475: 1, H0561: | S0150: 1, H0647: |
| OH.                 | )OH                 | <u>S</u>           | <u>3</u>           | 5                  | <u>10</u>          | <u>10</u>           | HOH              | Ř                   | 10                  | <u> </u>           | <u> </u>         | HO         | S0.                 | <u>P</u>   | H                | <u>80</u>     | SO               | H                | HO               | <u>H</u>         | Ĭ<br>L     | 80               | 요                | 0H               | <u>F</u>         | <u>20</u>        | <u>ŏ</u>    | <u>3</u>         | 80               |
|                     |                     |                    |                    |                    |                    |                     |                  |                     |                     |                    |                  |            |                     |            | ,                |               |                  |                  | •                |                  |            |                  |                  |                  |                  |                  |             |                  |                  |
|                     |                     |                    |                    |                    |                    |                     | _                |                     |                     |                    | <del></del> ,    |            |                     |            |                  |               |                  | ·                |                  |                  |            |                  |                  |                  |                  |                  |             |                  |                  |
|                     |                     |                    |                    |                    |                    |                     |                  |                     |                     |                    |                  |            |                     | _          |                  |               |                  |                  |                  | -                |            |                  |                  |                  |                  |                  |             |                  |                  |
|                     |                     | -                  |                    |                    |                    |                     |                  |                     |                     |                    |                  |            |                     |            |                  |               |                  |                  |                  |                  |            |                  |                  |                  |                  |                  |             |                  |                  |
|                     |                     |                    |                    |                    | <u> </u>           |                     |                  | ·                   |                     |                    |                  |            |                     |            |                  |               |                  |                  | -5-11            |                  |            |                  |                  |                  |                  |                  |             |                  |                  |
|                     |                     |                    |                    |                    |                    |                     |                  |                     |                     |                    |                  |            |                     |            |                  |               |                  |                  |                  |                  |            |                  |                  |                  |                  |                  |             |                  |                  |
|                     |                     |                    |                    |                    |                    | <del></del>         |                  |                     | ·                   |                    |                  |            |                     | _          |                  |               |                  |                  |                  |                  |            |                  |                  |                  |                  |                  | -           |                  |                  |
|                     |                     |                    |                    |                    |                    |                     |                  |                     |                     |                    |                  |            |                     |            |                  |               |                  |                  |                  |                  |            |                  |                  |                  |                  |                  |             |                  |                  |

|                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |   |                     |                     |                     | -                      |           | 95       |       |                  |                   |                   |                   |                     |                     |                     |                 |      |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|------------------------|-----------|----------|-------|------------------|-------------------|-------------------|-------------------|---------------------|---------------------|---------------------|-----------------|------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                        |           | 159595   |       |                  |                   |                   |                   |                     |                     |                     |                 |      | _                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                        |           | 21q11.2- | q21.1 |                  |                   |                   |                   |                     |                     |                     |                 |      | -                   |
| L0520: 1, L0769: 1, | L0796: 1, L0639: 1, | LU/61: 1, LU646: 1, | L0521: 1, L0533: 1, | L0376: 1, L0607: 1, | L0657: 1, L0659: 1, | L0635: 1, L0382: 1, | L0664: 1, S0374: 1, | H0684: 1, H0670: 1, | S0328: 1, S0146: 1, | S3012: 1, S3014: 1, | S0028: 1, S0032: 1, |   | L0779: 1, L0757: 1, | S0436: 1. L0596: 1. | L0592: 1, L0593: 1, | S0196: 1, H0542: 1 and | H0422: 1. | H0415: 2 |       |                  |                   |                   |                   |                     |                     |                     |                 |      | AR055: 9, AR061: 8, |
|                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                        |           |          |       | Phe-2 to Asp-14, | Leu-35 to Ile-42, | Leu-63 to Lys-69, | Thr-79 to Glu-84, | Ile-137 to Gln-149, | Thr-195 to Asp-200, | Lys-216 to Glu-222, | Asn-228 to Asn- | 233. |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | • | •                   |                     | ٠                   |                        |           | 2506     |       | 2507             |                   |                   |                   |                     |                     |                     |                 |      | 2508                |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   | ,                   |                     |                     |                        |           | 12 - 317 |       | 1 - 768          |                   |                   |                   |                     |                     |                     |                 |      | 860 - 1477          |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                        |           | 331      |       | 332              |                   |                   |                   |                     |                     |                     |                 |      | 333                 |
|                     | -                   |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |   |                     |                     | •                   |                        |           | 1003222  |       | 1003224          |                   |                   |                   |                     |                     |                     |                 |      | 1003706             |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                        |           | HOFMS19  |       | HSCLM55          |                   |                   |                   |                     |                     | ,                   |                 |      | HETJU23             |

|                     | ·                   |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                        |                        |                         |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|------------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                    |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                        |                         | •                   |                     |                     |                     |                     | ٠,                  |                     |
| AR033: 6, AR060: 6, | AR052: 5, AR089: 4, | AR053: 3, AR096: 2, | AR039: 2, AR104: 1 | L0749: 4, L0794: 3, | H0658: 3, H0046: 2, | .0803: 2, L0666: 2, | .0663: 2, L0777: 2, | H0556: 1, H0351: 1, | H0253: 1, H0014: 1, | F0023: 1, H0038: 1, | H0477: 1, H0412: 1, | .0370: 1, L0763: 1, | .0769: 1, L0639: 1, | .0800: 1, L0768: 1, | .0649: 1, L0804: 1, | .0776: 1, L0367: 1, | .0438: 1, H0435: 1, | H0670: 1, H0666: 1, | H0522: 1 and L0759: 1. | S0192: 130, L0659: 16, | <br>.0771: 6, S0194: 5, | .0662: 4, S0196: 4, | L0665: 3, H0251: 2, | H0252: 2, L0598: 2, | L0638: 2, L0637: 2, | L0649: 2, L0783: 2, | H0684: 2, H0170: 1, | H0687: 1, S0250: 1, |
|                     | 7                   |                     |                    |                     |                     |                     |                     |                     | .==                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | -                      | <br>- <b>-</b>          | 7                   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     | - ,-                |                     | •                   |                     |                     |                     |                     |                        | 2509                   |                         |                     |                     | -                   |                     |                     |                     |                     |
|                     |                     |                     | ,                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del>- '</del>      |                     |                     |                     |                     |                        | 3-515                  |                         |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 334                    |                         |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                      | 1004480                |                         |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                        | HNOKB73                |                         |                     |                     |                     |                     |                     |                     |                     |

|  |                                     |                                       | -                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|--|-------------------------------------|---------------------------------------|-----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |                                     |                                       |                       |                      |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0428: 1, H0048: 1,<br>H0591: 1, L0774: 1,<br>L0806: 1, L0809: 1,<br>L0790: 1, L0664: 1,<br>H0690: 1, L0751: 1,<br>L0756: 1, L0758: 1,<br>S0436: 1 and S0242: 1. | H0615: 3 and L0740:<br>1.           | H0615: 1                              | L0803: 11, L0748: 11, | L0777: 10, L0754: 8, | L0759: 6, S0126: 5, | 10439: 3, L0004: 3, | L0747: 3, L0731: 3, | L0758: 3, L0415: 2, | S0360: 2, H0437: 2, | H0457: 2, S0003: 2, | H0615: 2, L0774: 2, | L0775: 2, L0375: 2, | L0666: 2, S0328: 2, | L0750: 2, L0779: 2, | L0752: 2, L0755: 2, | L0757: 2, H0341: 1, | H0637: 1, H0580: 1, | H0592: 1, L0021: 1, | T0110: 1, H0620: 1, | H0266: 1, S0314: 1, |
|  | Phe-11 to Gly-16, Gln-44 to Ile-53. | Ser-1 to Cys-12,<br>Gly-16 to Val-29. | Arg-1 to Gly-8,       | Thr-82 to Thr-95,    |                     | ASn-130 to Giu-141. |                     |                     |                     |                     |                     |                     |                     |                     | 1                   |                     |                     |                     |                     |                     |
| ÷  | 2510                                | 2511                                  | 2512                  |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠,                  |                     |
|  | 392 - 550                           | 198 - 302                             | 111 - 683             |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|  | 335                                 | 336                                   | 337                   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 1004583                             | 1004619                               | 1004625               |                      |                     |                     | ż                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | HODFB06                             | HODJA76                               | норлу 60              |                      |                     |                     |                     |                     |                     | •                   |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |

|                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     | _                   | <br> |   |                     |                        |                  |                   |                     |                        |                     |                     |                       |                       |                      |                     |                     |                     |                     | $\neg$              |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------|---|---------------------|------------------------|------------------|-------------------|---------------------|------------------------|---------------------|---------------------|-----------------------|-----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |      |   |                     |                        |                  |                   | 180297,             | 230450,                | 263200,             | 601690              |                       |                       | ٠                    |                     |                     |                     |                     |                     |
|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |      | •                                       |                     |                        |                  |                   | 6p12-p11.1          |                        |                     |                     |                       |                       |                      |                     |                     |                     |                     |                     |
| H0039: 1, H0031: 1, | H0553: 1, L0055: 1, | Г0067: 1, Н0412: 1, | H0494: 1, H0561: 1, | L0763: 1, L0772: 1, | L0800: 1, L0764: 1, | L0771: 1, L0766: 1, | L0382: 1, L0809: 1, | L0790: 1, L0532: 1, | L0665: 1, H0144: 1, | H0520: 1, H0682: 1, | _    | H0436: 1, L0756: 1,                     | L0608: 1, S0026: 1, | H0543: 1 and S0424: 1. | H0615: 2         |                   | S0354: 1, H0083: 1, | H0615: 1 and H0665: 1. |                     |                     | L0752: 14, L0777: 12, | L0754: 11, L0731: 11, | H0692: 10, L0758: 8, | L0766: 6, L0759: 6, | S0358: 5, L0809: 5, | S0222: 4, S0003: 4, | H0328: 4, L0769: 4, | L0771: 4, L0803: 4, |
|                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |      |   | •                   |                        | His-7 to Gly-17, | Phe-24 to Trp-40. | Gln-24 to Leu-29,   | His-38 to Asn-50,      | Gly-117 to Tyr-128, | Ser-135 to Pro-147. |                       |                       |                      |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |      |   |                     |                        | 2513             |                   | 2514                |                        |                     |                     | 2515                  |                       |                      |                     |                     | ÷                   | ,                   |                     |
|                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |      | *************************************** |                     | ,                      | 1-231            |                   | 1-711               |                        |                     |                     | 518 - 1294            |                       |                      |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |      |   | ,                   | •                      | 338              |                   | 339                 |                        |                     |                     | 340                   |                       |                      |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |      |   |                     |                        | 1004627          |                   | 1004631             |                        |                     |                     | 1004632               |                       |                      |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | )                   |                     |                     |                     |                     |      |   |                     |                        | HODEF10          |                   | HODFB03             | · · · · ·              |                     |                     | HPMLN08               |                       |                      |                     |                     |                     |                     |                     |

|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                   |  |                     |                      |                     |                     |                     | •                   |                     |                     |                     |                     |                     |   |                                       |                     |
|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|--|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------------------------|---------------------|
|                     |                    |                     |                     |                     |                     |                     |                     |                     | ·.                  | ·                   |                     |                     |                     |                   | <u>.                                    </u> |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     | _                   |   |                                       |                     |
|                     |                    |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                   |  |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                                       | į                   |
| _0740: 4, S0194: 4, | 0005: 3, S0360: 3, | H0068: 3, H0494: 3, | .0774: 3, L0775: 3, | .0776: 3, H0521: 3, | .0747: 3, L0749: 3, | .0757: 3, H0170: 2, | H0713: 2, S0444: 2, | H0427: 2, H0156: 2, | S0010: 2, L0157: 2, | H0687: 2, T0006: 2, | H0628: 2, H0169: 2, | H0598: 2, L0662: 2, | .0768: 2, L0805: 2, | 566: 2, L0438: 2, | H0547: 2, H0670: 2,                          | H0648: 2, H0539: 2, | .0748: 2, L.0589: 2, | .0599: 2, H0556: 1, | F0002: 1, L0002: 1, | H0341: 1, H0720: 1, | S0400: 1, H0483: 1, | H0402: 1, H0638: 1, | S0442: 1, S0376: 1, | H0733: 1, S0132: 1, | H0645: 1, L0717: 1, | H0431: 1, H0331: 1, | H0486: 1, H0013: 1,                     | H0036: 1, H0590: 1,                   | H0052: 1, H0309: 1, |
| LOZ                 | <u> </u>           | HO                  | <u>1.07</u>         | <u> </u>            | <u> </u>            | 10.7                | HO                  | HO                  | 200                 | OH                  | OH                  | HO                  | 101                 | <u>10</u>         | HO   | HO                  | 100                  | <u>100</u>          | 100                 | OH                  | SO <sub>x</sub>     | OH HO               | 20°                 | HO                  | OH                  | OH OH               | <u>OH</u>                               | 0H                                    | HO                  |
|                     | <del></del>        |                     | ·                   |                     |                     |                     |                     |                     |                     | <b></b>             |                     |                     | -                   |                   |  |                     |                      |                     | -                   |                     |                     |                     |                     |                     |                     | <u> </u>            |   | · · · · · · · · · · · · · · · · · · · |                     |
|                     |                    |                     |                     | -                   |                     |                     |                     |                     |                     |                     | _                   |                     | ,                   |                   |  |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     | *************************************** | :                                     |                     |
|                     |                    |                     | -                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                   |  |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                                       |                                       | ,                   |
|                     |                    |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                   |  |                     |                      |                     |                     |                     | ,                   | ٠                   |                     |                     |                     |                     |   |                                       |                     |
|                     |                    |                     |                     | ē                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                   |  |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                                       |                     |

|  |                     |                     |                     |  |                     |                     |                     |                     |              |              |              |              |              | -            |          |          |              |              |                     |                     |                     |                     |                     |                     |              |                     |              |
|--|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|--------------|--------------|--------------|--------------|--------------|--------------|----------|----------|--------------|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------|---------------------|--------------|
|  |                     |                     | _                   |  | -                   |                     |                     |                     |              |              |              | •            |              |              |          | -        |              |              | •                   |                     |                     |                     |                     | •                   |              |                     |              |
| H0327: 1, H0050: 1,<br>L0471: 1, H0024: 1, | S0388: 1, H0510: 1, | 10428: 1, H0039: 1, | H0644: 1, L0055: 1, | 1, H0212: 1,                                 | S0036: 1, H0038: 1, | H0272: 1, H0366: 1, | S0450: 1, S0440: 1, | S0210: 1, S0422: 1, | 1, L0598: 1, | 1, L0667: 1, | 1, L0646: 1, | 1, L0643: 1, | 1, L0648: 1, | 1, L0794: 1, |          |          | 1, L5622: 1, | 1, L0789: 1, | .0663: 1, S0374: 1, | S0126: 1, S0122: 1, | H0658: 1, S0380: 1, | H0710: 1, H0478: 1, | S0027: 1, S0206: 1, | .0439: 1, L0750: 1, | 1, L0779: 1, | H0445: 1, H0343: 1, | 1, L0591: 1, |
| H0327:<br>L0471:                           | S0388:              | H0428:              | H0644:              | H0673: 1                                     | 20036:              | H0272:              | S0450:              | S0210:              | S0002: 1,    | L0638: 1,    | L0772: 1     | L0800: 1,    | L0773: 1     | L0626: 1, I  | L0804: 1 | T0806: 1 | L0559: 1, ]  | L5623: 1,    | T0663:              | S0126:              | H0658:              | H0710:              | S0027:              | L0439:              | L0756: 1,    | H0445:              | S0434: 1     |
|  |                     |                     |                     |  |                     |                     |                     |                     |              |              |              |              |              |              |          |          | _            |              |                     |                     |                     |                     |                     |                     |              |                     |              |
|  |                     |                     |                     | <u>.                                    </u> | -                   | •••                 |                     | •                   |              |              |              |              |              |              |          | _        |              |              |                     |                     |                     |                     |                     | -                   |              |                     | ı            |
|  | •                   |                     |                     |  |                     |                     |                     |                     |              |              |              |              |              |              |          |          |              | -            |                     |                     |                     |                     |                     |                     |              |                     | ,            |
|  |                     |                     |                     |  | -                   |                     |                     |                     |              |              |              |              |              |              |          |          |              |              |                     |                     |                     |                     |                     | -                   |              |                     |              |

|                     |                     |                   |                     | _                   |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                        |           |                     |                     |                     |                     |                     |
|---------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                   |                     |                     |                     | •                   |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     | <br>                | ı                   |                     |
| L0608: 1, L0362: 1, | H0668: 1, S0026: 1, | H0032: 5 H0620: 4 | H0599: 3, H0024: 3, | H0615: 3, H0556: 2, | H0141: 2, H0585: 2, | S0420: 2, H0014: 2, | H0212: 2, L0748: 2, | 0740: 2, H0624: 1, | H0170: 1, H0149: 1, | H0484: 1, H0580: 1, | H0393: 1, H0370: 1, | H0592: 1, H0318: 1, | S0049: 1, H0052: 1, | H0530: 1, H0081: 1, | H0012: 1, H0023: 1, | H0286: 1, H0039: 1, | H0135: 1, H0272: 1, | H0412: 1, H0059: 1, | S0440: 1, H0132: 1, | S0002: 1, L0602: 1, | L0746: 1, H0445: 1 and | H0506: 1. | AR096: 1, AR089: 1, | AR104: 0, AR055: 0, | L0761: 3, L0439: 3, | L0747: 3, L0766: 2, | H0659: 2, L0779: 2, |
|                     | <del></del>         |                   |                     |                     |                     | <u> </u>            |                     |                    |                     | -                   |                     |                     | _ ~ ~               |                     |                     |                     |                     |                     |                     |                     |                        |           | Ala-1 to Gly-23,    | Gly-26 to Leu-32,   | Gln-145 to Thr-151. |                     |                     |
|                     |                     | 2516              |                     |                     |                     | •                   |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2517                |                     | ٠                   |                     |                     |
|                     | ·                   | 1 - 378           | 2                   |                     |                     | -                   |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 57 - 773            | •                   |                     |                     | ·                   |
|                     |                     | 341               | 1                   |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 342                 |                     |                     |                     |                     |
| •                   |                     | 1004633           |                     | -                   |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1004635             |                     |                     |                     |                     |
|                     |                     | норенов           |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                        |           | HEGBF25             |                     |                     |                     | •                   |

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| L0777: 2, H0170: 1,<br>S0360: 1, H0550: 1,<br>H0023: 1 H0018: 1 | H0641: 1, L0763: 1, | L0769: 1, L0764: 1, | L0803: 1, L0774: 1, | L0655: 1, L0666: 1, | H0648: 1 and H0436: 1. | H0328: 1 and H0615: | 1 | L0764: 9, L0747: 6, | L0766: 5, L0070: 5, | L0748: 4, L0662: 3, | L0749: 3, L0758: 3, | L0759: 3, L0601: 3, | H0574: 2, H0014: 2, | H0615: 2, L0529: 2, | L0666: 2, L0596: 2, | H0265: 1, H0556: 1, | H0583: 1, S0356: 1, | S0360: 1, S0222: 1, | H0486: 1, L0021: 1, | H0581: 1, H0309: 1, | H0545: 1, H0172: 1, | H0188: 1, S0214: 1, | H0252: 1, H0328: 1, | <br>H0625: 1, H0561: 1, | S0426: 1, L0763: 1, | L0769: 1, L0646: 1, |
|   |                     |                     |                     |                     |                        | Ser-1 to Asp-19.    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         | ,                   |                     |
| -   |                     |                     |                     |                     |                        | 2518                |   | 2519                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |
|   |                     |                     |                     |                     |                        | 201 - 272           |   | 2 - 208             |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     | •                   |                     |                         | ,                   |                     |
|   |                     |                     |                     | •                   |                        | 343                 |   | 344                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                         |                     |                     |
|   |                     | •                   |                     |                     |                        | 1004643             |   | 1004648             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |
|   |                     |                     |                     |                     |                        | HODJB51             |   | HODEC38             |                     |                     |                     |                     |                     |                     | ·                   |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                         |                     |                     |

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|                     |                    |                     |                    |                     |                     |                     |                     |                     |                     |                    | ٠.                  |                        |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     | ļ                   |
| .0641: 1, L0645: 1, | 0773: 1, L0768: 1, | ,0794: 1, L0551: 1, | 0774: 1, L0775: 1, | 50375: 1, L0378: 1, | .0805: 1, L0655: 1, | .0658: 1, L0659: 1, | ,0783: 1, L0532: 1, | ,0664: 1, H0521: 1, | .0611: 1, S0432: 1, | 0757: 1, L0589: 1, | .0591: 1, L0599: 1, | H0543: 1 and H0423: 1. | L0794: 7, L0776: 4, | .0740: 4, H0046: 3, | .0805: 3, L0749: 3, | H0624: 2, S0282: 2, | .0157: 2, H0615: 2, | .0663: 2, H0519: 2, | ,0748: 2, L0747: 2, | 0777: 2, L0731: 2, | H0686: 1, H0294: 1, | H0486: 1, H0349: 1, | H0009: 1, H0178: 1, | H0050: 1, L0471: 1, | H0328: 1, H0030: 1, | H0412: 1, S0448: 1, | .0764: 1, L0662: 1, | L0807: 1, L0789: 1, | .0792: 1, L0666: 1, |
| 7                   | <u> </u>           |                     | 브                  |                     | <u></u>             | <u>.</u>            |                     | <u> </u>            | <u> </u>            | <u>_</u>           |                     | <u>i 11</u>            | Arg-6 to Gly-11,    | <u>-</u>            | Ala-48 to Asp-68. L |                     | <del>. = 1</del>    |                     |                     | <u>.</u>           |                     |                     | <del>14</del>       |                     | <u> </u>            |                     | <u> </u>            |                     |                     |
| <del></del>         |                    | -,                  |                    |                     |                     | •                   |                     | -                   |                     |                    | :                   |                        | 2520                |                     |                     |                     | -                   |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                    | -                   |                    |                     |                     |                     |                     |                     | •                   |                    | 1                   |                        | 3 - 236             |                     |                     | •                   |                     | -                   |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                    |                     |                    |                     |                     |                     |                     |                     |                     |                    | ,                   |                        | 345                 |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |
|                     |                    | -                   |                    | ,                   |                     | •                   |                     |                     |                     |                    |                     |                        | 1004660             |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                    |                     |                    |                     |                     |                     |                     |                     |                     |                    |                     |                        | HODIQ24             | ,                   |                     |                     |                     |                     | ,                   |                    |                     | ==                  |                     |                     |                     |                     |                     |                     |                     |

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|                  |                    |                     |   |                     |  |   |                     |                     |   |   |                     |                     |                    |                  |                  |                  |                  |                  |               |               |                   |                  | <u>-</u>         |                  |                  |                 |
|                  |                    |                     |   |                     |  |   |                     |                     |   |   |                     |                     |                    |                  |                  |                  |                  |                  |               |               |                   |                  |                  |                  |                  |                 |
|                  |                    | :                   |   |                     |  |   |                     |                     |   |   |                     |                     |                    |                  |                  |                  |                  |                  |               |               |                   |                  |                  |                  |                  |                 |
| 70: 1,           | 79: 1,             | 422: 7,             | (21: 4,<br>60: 3                          | 63: 3,              | 34: 3,                                 | 98: 2,                                  | 08: 2,              | 522: 2,             | 194: 2,                                 | 55: 2,                                  | 18: 2,              | 596: 2,             | 45: 2,             | 556: 1,          | 50: 1,           | .16: 1,          | 76: 1,           | 586: 1,          | H0250: 1,     | T0071: 1,     | <del>54.</del> 1, | 412: 1,          | 1, 1,            | 549: 1,          | 65: 1,           | 42: 1,          |
| S0126: 1, H0670: | 0754: 1, L0779: 1, | H0581: 8, H0422: 7, | .0766: 5, H0521: 4,<br>.0588: 4, S0360: 3 | H0486: 3, L0663: 3  | 436: 3, S04                            | 583: 2, S02                             | S0354: 2, S0408: 2, | H0046: 2, H0622:    | 090: 2, HO <sup>2</sup>                 | 761: 2, L06                             | L0659: 2, H0518: 2, | H0522: 2, H0696: 2, | .0777: 2, H0445: 2 | H0423: 2, H0556: | S0430: 1, H0650: | H0657: 1, S0116: | S0356: 1, S0376: | H0580: 1, H0586: | .0586: 1, H02 | .0021: 1, TOC | H0596: 1, H0644:  | H0264: 1, H0412: | H0561: 1, S0440: | H0641: 1, H0649: | .0770: 1, L5565: | .0372: 1, L0642 |
| S01              |                    |                     |   |                     | 1,H0                                   | 3, HO                                   | 0, 803              |                     | 2, H0                                   | 7,10                                    | 4.<br>Lo            |                     | 2                  | <u>H</u>         | <u>8</u> 6       | 9                | S0:              | <u>H</u>         | 3             | <u>3</u>      | <u>H</u>          | HOH              | HOH              | 呈                | 0                | 3               |
|                  |                    | Asn-32 to Glu-42,   | Leu-59 to Ala-66,                         | ceu-100 to Leu-110, | Asp-155 to Thr-161, H0436: 3, S0434: 3 | Thr-166 to Cys-173, H0583: 2, S0298: 2, | Leu-214 to Ser-220, | Ser-227 to Lys-232, | Arg-236 to Gly-242, H0090: 2, H0494: 2, | Phe-257 to Asp-264, L0761: 2, L0655: 2, | Arg-309 to Ala-314. | )                   |                    | ·                |                  |                  |                  |                  |               |               |                   |                  |                  |                  |                  |                 |
|                  |                    |                     | <u> </u>                                  | <u> </u>            | As                                     | <u>E</u>                                | <u>۾</u>            | Se                  | Aı                                      | 五                                       | A                   |                     |                    |                  |                  | _                |                  |                  |               | -             |                   |                  |                  |                  |                  | _               |
|                  |                    | 2521                | •   |                     |  |   |                     |                     |   |   |                     |                     |                    | ı                |                  |                  |                  |                  |               |               | _                 |                  |                  |                  |                  |                 |
|                  |                    | 399 - 1400          |   |                     |  |   |                     |                     | •                                       |   |                     |                     |                    | ٠                | •                |                  |                  |                  |               |               | •                 |                  |                  |                  |                  |                 |
|                  |                    | 346                 |   |                     |  |   |                     |                     |   | -                                       |                     |                     |                    |                  |                  |                  |                  |                  | •             |               |                   |                  |                  |                  |                  |                 |
|                  |                    | 1004887             |   |                     |  |   |                     |                     |   |   |                     |                     |                    |                  |                  |                  |                  |                  |               |               |                   |                  |                  |                  |                  |                 |
|                  |                    | HVVDD56             |   |                     |  |   |                     |                     |   |   |                     |                     |                    |                  |                  |                  |                  |                  |               |               |                   |                  |                  |                  |                  |                 |

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|  | ···                                       |                     |                     |                     |                     |                     | ·                   |                        | 104311,               | 109150,               | 182600,               | 245200,               | 601208                                    |   |                              |   |   |   |                     |                     |   |                     |                     |                     |                     | :_                  |                     |
|  | _   |                     |                     |                     |                     |                     |                     |                        | 14q24.3               | <u> </u>              |                       |                       | •   |   |                              |   |   |   |                     |                     |   |                     |                     |                     |                     |                     |                     |
| L0387: 1, L0381: 1,<br>L0775: 1, L0527: 1, | L0664: 1, L0665: 1,<br>S0216: 1, S0374: 1 | L0565: 1, H0684: 1, | H0435: 1, H0659: 1, | H0648: 1, H0672: 1, | H0710: 1, H0555: 1, | L0748: 1, L0754: 1, | L0749: 1, L0756: 1, | H0595: 1 and H0543: 1. | H0696: 37, H0692: 26, | H0650: 22, H0271: 21, | S0434: 21, S0406: 17, | H0656: 13, S0360: 13, | Leu-182 to Lys-198, H0411: 12, H0710: 12, | Cys-204 to Thr-212, S0280: 11, H0416: 11, | H0553: 11, L0666: 11,        | Leu-237 to Lys-242, H0486: 10, H0581: 10, | Asn-295 to Ser-302, H0555: 10, L0751: 10, | Leu-314 to Phe-319, H0713: 9, S0354: 9, | L0662: 9, S0126: 9, | H0717: 8, S0358: 8, |   | S0374: 8, H0670: 8, | L0745: 8, H0436: 7, | L0748: 7, H0013: 6, | H0427: 6, H0596: 6, | H0644: 6, H0674: 6, | L0659: 6, L0754: 6, |
|  |   | •                   | •                   |                     | ,                   | •                   |                     |                        | His-1 to Arg-20,      | Ala-30 to Ala-38,     | Ala-58 to Ser-69,     | Ser-138 to Pro-143,   | Leu-182 to Lys-198,                       | Cys-204 to Thr-212,                       | Ala-217 to Leu-229, H0553: 1 | Leu-237 to Lys-242,                       | Asn-295 to Ser-302,                       | Leu-314 to Phe-319,                     | Ser-327 to Ser-338, | Arg-409 to Ser-423. | 1 |                     |                     |                     |                     |                     |                     |
|  |   |                     |                     | =                   |                     | _                   |                     |                        | 2522                  |                       |                       |                       |   |   |                              |   |   |   |                     |                     |   |                     |                     |                     |                     |                     |                     |
|  |   |                     |                     | •                   |                     |                     |                     |                        | 3 - 1292              | - "-                  |                       |                       | •   |   |                              |   |   |   |                     |                     |   |                     |                     |                     |                     | :                   |                     |
|  |   |                     |                     |                     |                     |                     |                     |                        | 347                   |                       |                       |                       | ,   |   |                              |   |   |   |                     |                     |   |                     |                     |                     |                     |                     |                     |
|  |   |                     |                     |                     |                     |                     |                     |                        | 1004950               |                       |                       |                       |   |   |                              |   |   |   |                     |                     |   |                     |                     |                     |                     |                     |                     |
|  |   |                     |                     |                     |                     |                     |                     | _                      | HTHDV01               |                       |                       |                       |   |   |                              |   |   |   |                     |                     |   |                     |                     |                     |                     |                     |                     |

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| H                   |                     |                    |                    |                     |                     |                     |                     |                    |                     |                     |                    |                    |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| L                   |                     |                    | ••                 |                     |                     |                     |                     |                    |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |
| ١.                  | · •                 | *                  |                    | _,^                 | r                   |                     | _                   |                    |                     |                     | - <b>^</b> ^       |                    | _                   |                     |                     |                     | _                   | ~£                  |                     |                     | •                   | ~s                  | ລົ                  | ~;                  | ີ້ດໂ                | ~î                  |                     | - <b>5</b>          |                     |
| S0442: 5. H0580: 5. | H0156: 5, H0457: 5, | H0615: 5, H0622: 5 | H0063: 5, L0776: 5 | H0648: 5, H0263: 4, | H0179: 4, H0031: 4, | H0163: 4, L0764: 4, | .0649: 4, L0438: 4, | H0672: 4, L0439: 4 | H0677: 4, L0600: 4, | S0116: 3, S0444: 3, | 121:3              | 38: 3              | S0440: 3, L0598: 3, | .0803: 3, L0809: 3, | .0532: 3, L0664: 3, | .0665: 3, H0689: 3, | S0378: 3, L0756: 3, | H0624: 2, H0556: 2, | H0402: 2, S0356: 2, | S0376: 2, S0046: 2, | S0222: 2, H0574: 2, | H0635: 2, H0575: 2, | H0036: 2, H0597: 2, | H0544: 2, H0046: 2, | H0123: 2, H0050: 2, | H0014: 2, H0201: 2, | F0010: 2, H0355: 2, | H0135: 2, T0004: 2, | S0344: 2, S0002: 2, |
| H05                 | , H04               | , H06              | ,107               | , H02               | , H00               | , 1.07              | 104                 | ,104               | , L06               | \$05                | , H04              | , S04              | 105                 | , L08               | , L06               | , H06               | 1007                | , H05               | , S03               | 800                 | , H05               | , H0                | , H05               | , HOC               | , H0(               | , H02               | , ноз               | , T00               | , S00               |
| 12: 5.              | 56: 5               | 15:5               | 63: 5              | 48: 5               | 79:4                | 63:4                | 49:4                | 72: 4              | 77:4                | 16: 3,              | H0619: 3, H0421: 3 | H0032: 3, S0438: 3 | 40:3,               | 03:3                | 32:3                | 65:3                | 78:3,               | 24: 2               | 02:2                | 76: 2,              | 22: 2,              | 35:2                | 36: 2               | 4:2                 | 23: 2               | 14: 2               | 10:2                | 35: 2               | 44:2                |
| S04                 | H01                 | H06                | <u>H</u>           | H06                 | H01                 | H01                 | 106                 | 90 <u>H</u>        | 90H                 | S01                 | 90H                | <u>H</u>           | <b>S</b> 04         | 807                 | 105                 | 8                   | <u>S03</u>          | H06                 | HOH                 | <u>S</u> 03,        | S02                 | 90H                 | H00                 | H05                 | H01                 | H00                 | <u>1</u> 00         | H01                 | <b>S03</b>          |
|                     |                     |                    |                    |                     |                     |                     |                     |                    |                     |                     |                    |                    |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| -                   |                     |                    |                    |                     |                     |                     |                     |                    |                     |                     |                    |                    |                     | · · · · ·           |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     | _                   | _                   |                     |                     |                     |
|                     | •                   |                    |                    |                     |                     |                     |                     |                    |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| L                   |                     |                    |                    |                     |                     |                     | -                   |                    |                     |                     |                    | _                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |

|           |                     |                     |                     |                     |                      |                     |                     |                    |                    |                     |                     |         |                     |                  |                  |                  |                  |                  |                  | -,-,-            |                  |                    |                  |                  |                  |                  |                  |                    |                  |
|-----------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|------------------|------------------|------------------|------------------|------------------|--------------------|------------------|
|           |                     |                     |                     |                     |                      |                     |                     |                    |                    |                     |                     |         |                     |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |                    |                  |
|           | ,                   |                     |                     | ,                   |                      |                     |                     |                    |                    |                     |                     |         |                     |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |                    |                  |
|           |                     | ···-                |                     |                     |                      |                     |                     |                    |                    |                     |                     |         |                     |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  | •                |                  |                  |                  |                    |                  |
| 2,        | 2,                  | ): 2,               | l: 2,               | 3: 2,               | 5. 2,                | );<br>2,            | 5: 2,               | 5: 1,              | 7: 1,              | ): 1,               | <b>9</b> : 1,       | 8: 1,   | 5: 1,               | 1: 1,            | 9: 1,            | 1: 1,            | 0: 1,            | 7: 1,            | 4: 1,            | 2: 1,            | 9: 1,            | 0: 1,              | 1: 1,            | 4: 1,            | 3: 1,            | 8: 1,            | 9: 1,            | 2: 1,              | 9: 1,            |
| L0372: 2, | L0653               | H0535               | H052]               | , L074              | L0746                | L0779               | S0436               | , H068             | , T008             | S0430               | H0669               | , H063  | L0005               | , H035           | H0369            | , H044           | , H060           | , H058           | , H024           | , L002           | , нозо           | , H015             | , L047           | , H002           | , L016           | , H068           | , нооз           | , L014,            | , H016           |
| .0769: 2, | .0375: 2, L0653: 2, | 30328: 2, H0539: 2, | .0602: 2, H0521: 2, | H0479: 2, L0743: 2, | .0744: 2, L.0746: 2, | .0749: 2, L0779: 2, | .0758: 2, S0436: 2, | H0265: 1, H0685: 1 | H0716: 1, T0087: 1 | S6024: 1, S0430: 1, | S0212: 1, H0669: 1, | 3662: 1 | S0418: 1, L0005: 1, | H0645: 1, H0351: | S6022: 1, H0369: | H0550: 1, H0441: | H0409: 1, H0600: | H0586: 1, H0587: | .0586: 1, H0244: | H0098: 1, L0022: | H0590: 1, H0309: | H0231: 1, H0150: ] | H0081: 1, L0471: | H0620: 1, H0024: | H0373: 1, L0163: | H0060: 1, H0688: | H0428: 1, H0039: | F0023: 1, L0142: 1 | H0168: 1, H0169: |
| 3         | <u>김</u>            | SO                  | <u> </u>            | H                   | <u>3</u>             | <u>3</u>            | 2                   | H                  | H                  | Se                  | SO                  | Ħ       | SO                  | Ħ                | Se               | Ħ                | Ħ                | Ħ                | 걸                | Ħ                | Ħ                | Ħ                  | H                | Ħ                | H                | Ħ                | Ħ                | Ĕ.                 | 王                |
|           |                     |                     |                     |                     |                      |                     |                     |                    |                    |                     | •                   |         |                     |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |                    |                  |
|           |                     |                     |                     | ı                   |                      |                     |                     |                    |                    |                     |                     |         |                     |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |                    |                  |
|           |                     |                     |                     |                     |                      |                     | _                   |                    |                    |                     |                     |         | -                   |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |                    |                  |
| _         |                     |                     |                     |                     |                      |                     |                     |                    |                    |                     |                     |         | ···                 |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |                    |                  |
| ,         |                     |                     |                     |                     |                      |                     |                     |                    |                    |                     |                     |         |                     |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |                    |                  |
|           |                     |                     |                     |                     |                      |                     |                     |                    |                    |                     |                     |         |                     |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |                    | _                |
|           |                     |                     |                     | •                   |                      |                     |                     | <del></del>        |                    |                     |                     |         |                     |                  | ·                |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |                    |                  |
|           | •                   |                     |                     |                     |                      |                     |                     |                    |                    |                     |                     |         |                     |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  | ٠                |                  |                  |                    |                  |
|           |                     |                     |                     |                     |                      |                     |                     |                    |                    |                     |                     |         | <u></u> -           | <u>-</u>         |                  |                  |                  |                  | •                |                  |                  |                    |                  | -                |                  |                  |                  |                    |                  |
|           |                     |                     |                     |                     |                      |                     |                     |                    |                    |                     |                     |         |                     |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |                    |                  |
| L         |                     |                     |                     |                     |                      |                     |                     |                    |                    |                     |                     |         |                     |                  |                  |                  |                  |                  |                  |                  | ·                |                    |                  |                  |                  |                  |                  |                    |                  |

|   |   | ·  |
|---|---|--|
|   |   | 125270,<br>125270,<br>128100,<br>137350,<br>191100,  |
| · |   | 9q34   |
|   | L0530: 1, L0647: 1,<br>L0663: 1, H0725: 1,<br>H0699: 1, L0352: 1,<br>H0690: 1, H0660: 1,<br>S0330: 1, S0380: 1,<br>H0709: 1, S0404: 1,<br>H0709: 1, S0404: 1,<br>H0478: 1, L0611: 1,<br>S3014: 1, S0027: 1,<br>S0206: 1, L0740: 1,<br>L0780: 1, L0731: 1,<br>S0260: 1, H0445: 1,<br>H0343: 1, L0599: 1,<br>L0361: 1, S0462: 1 and | H0052: 1, H0012: 1,<br>H0271: 1, H0165: 1,<br>H0672: 1, H0521: 1,<br>L0439: 1, L0754: 1 and<br>H0423: 1. |
|   |   | Pro-52 to Gly-58.  |
|   |   | 2523   |
|   |   | 203 - 400  |
|   |   | 348  |
|   |   | 1005153  |
|   |   | HVVDJ95  |

| 215700,<br>223360,<br>268900,<br>601850 | 147450,<br>176261,<br>253270,<br>601399  | 120950,<br>120960,<br>138140,<br>178300,<br>187040,<br>600101,<br>600650,<br>600650,<br>600722,   |
|---|--|---|
|   | 21q22.1-<br>q22.2  | 1p32  |
|   | L0748: 11, H0591: 2,<br>L0779: 2, L0758: 2,<br>H0624: 1, S0342: 1,<br>S0045: 1, H0351: 1,<br>H00427: 1, S0010: 1,<br>H0052: 1, H0251: 1,<br>H0066: 1, L0471: 1,<br>H0622: 1, H0615: 1,<br>H0622: 1, H0613: 1,<br>L0769: 1, L0774: 1,<br>L0769: 1, L0774: 1,<br>L0769: 1, L0774: 1,<br>L0769: 1, L0774: 1,<br>L0769: 1, L0774: 1,<br>L0769: 1, L0774: 1,<br>L0769: 1, H0593: 1,<br>H0521: 1, H0593: 1,<br>L0744: 1, L0747: 1, | L0755: 11, L0766: 4,<br>L0747: 4, L0764: 2,<br>L0663: 2, H0556: 1,<br>H0686: 1, S0444: 1,<br>S0408: 1, H0580: 1,<br>H0722: 1, H0290: 1,<br>L0483: 1, H0165: 1,<br>H0494: 1, H0132: 1,<br>S0150: 1, S0208: 1,<br>L0772: 1, L0768: 1, |
|   | Lys-1 to Phe-58, Pro-62 to Ser-105, Arg-118 to Asp-154, Pro-181 to Pro-187, Ala-215 to Asp-221, Pro-228 to Phe-240, Pro-264 to Ser-269, Ser-281 to Asp-291, Glu-301 to Phe-314.  | Lys-5 to Leu-10,<br>Ser-20 to Glu-30,<br>Leu-32 to Thr-37.  |
|   | 2524   | 2525  |
|   | 2115 - 1081  | 3 - 1013  |
| ·                                       | 349  | 350   |
|   | 1005236  | 1005359   |
| ·                                       | HODIY29  | HOEL.P29  |

|   | 138079,<br>138079,<br>139191,<br>142959,<br>153880,<br>180104,<br>600994,<br>601649  |   |   |
|---|--|---|---|
|   | 133<br>134<br>144<br>15<br>18<br>10<br>60<br>60  |   |   |
|   | 7p15   |   |   |
| L0784: 1, L0805: 1,<br>H0547: 1, S0126: 1,<br>H0659: 1, H0660: 1,<br>H0627: 1, L0749: 1,<br>L0779: 1, L0731: 1, | 3, H0539: 3, 2, L0664: 2, 1, S0360: 1, 1, S0007: 1, 1, H0266: 1, 1, L0656: 1, 1, L0656: 1, 1, L0663: 1, 1, L0592: 1, 1, L0362: 1 ar 1, L0362: 1 ar 1.  | AR089: 5, AR096: 5,<br>AR053: 4, AR060: 3,<br>AR039: 3, AR033: 3,<br>AR055: 2, AR104: 2,<br>AR061: 1<br>H0583: 1 and H0036: | L0777: 8, L0809: 4,<br>L0749: 4, H0038: 3,<br>L0769: 3, L0783: 3, |
|   | Lys-9 to Thr-17, Lys-41 to Asn-55, Leu-57 to Asn-65, Val-67 to Asn-79, Ile-122 to Cys-132, Leu-135 to Ala-147, Gln-175 to Ala-197, Pro-227 to Thr-251, Pro-253 to Gly-264, Pro-288 to Glu-296, Gln-312 to Val-321. |   | Thr-34 to Ser-46.   |
|   | 2526   | 2527  | 2528  |
|   | 2 - 1015   | 2 - 781   | 68 - 205  |
|   | 351  | 352   | 353   |
|   | 1005384  | 1005511   | 1005843   |
| ·   | HWLFG04  | HYAAC49   | HC00A71   |

|                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                        |           | 123620,             | 600850              |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                        |           | 22q11.23            | ,                   |                     |                     |                     |                     |                     |                     |                     |                     | i |                     |
| L0740: 3, H0581: 2, | H0546: 2, H0024: 2, | L0521: 2, L0375: 2, | H0670: 2, L0748: 2, | L0758: 2, L0759: 2, | H0171: 1, S0360: 1, | H0351: 1, L0622: 1, | H0052: 1, H0424: 1, |   | H0059: 1, H0494: 1, | H0646: 1, L0369: 1, | L0763: 1, L0766: 1, | L0776: 1, L0657: 1, | L0789: 1, L0666: 1, | L0663: 1, L0565: 1, | H0658: 1, L0439: 1, | L0750: 1, L0753: 1 and | L0757: 1. | L0665: 4, L0779: 3, | L0646: 2, L0800: 2, | L0650: 2, L0659: 2, | S0040: 1, S0442: 1, | S0045: 1, H0619: 1, | H0052: 1, H0024: 1, | S0051: 1, H0604: 1, | H0030: 1, H0135: 1, | L0639: 1, L0761: 1, | L0372: 1, L0641: 1, |   | LU8U3: 1, LU7/6: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     | -                   |                     |                     |                     |                     | •                      |           | Ser-1 to Ser-7,     | Gly-21 to Arg-37.   |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     | -                      |           | 2529                |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
|                     |                     |                     |                     | - 12                |                     |                     |                     |   |                     |                     |                     |                     |                     |                     | -                   |                        | •         | 879 - 478           |                     | •                   |                     |                     |                     |                     |                     |                     |                     |   |                     |
|                     |                     |                     |                     |                     | ٠                   |                     |                     | , |                     |                     |                     |                     |                     |                     |                     |                        |           | 354                 |                     | -                   |                     |                     |                     |                     |                     |                     |                     |   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |   | •                   |                     |                     |                     |                     |                     |                     |                        |           | 1005974             |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                        |           | HOUFB45             |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |

|                    |                  |                  |                | •                |                   | ,                 |                      |                      |                     |                    |                  |                     |                     |                                       |                    |                    |                 |                    |                    | -                |                  |                  |                  |                  |                  |                  |                  |                     |                  |
|--------------------|------------------|------------------|----------------|------------------|-------------------|-------------------|----------------------|----------------------|---------------------|--------------------|------------------|---------------------|---------------------|---------------------------------------|--------------------|--------------------|-----------------|--------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------|------------------|
|                    | <u>.</u>         |                  | <del></del>    |                  |                   |                   |                      |                      |                     |                    | _                |                     |                     |                                       |                    |                    |                 |                    |                    |                  |                  |                  |                  | -                |                  | -                |                  |                     | _                |
| 1,                 | 1,               | 1,               | 1,             | 1,               | 1,                | 1,                | 08: 1.               | 7:9,                 | 6,                  | 4,                 | 3,               | 2,                  | ,2                  | 2,                                    | 2,                 | 2,                 | 2,              | 2,                 | 2,                 | 1,               | .1,              | . 1,             | 1,               | 1,               | 1,               | : 1,             | , <del>,</del> ; | 1,                  | 1,               |
| L0657: 1, L0656: 1 | .0783: 1, L0791: | .0666: 1, L0663: | 438: 1, H0547: | H0672: 1, H0436: | 0748: 1, L0747: 1 | 0749: 1, L0777: 1 | .0758: 1 and L'0608: | L0439: 13, L0777: 9, | .0717: 8, L0748: 6, | L0659: 5, L0747: 4 | H0318: 3, L0665: | .0779: 3, H0170: 2, | H0212: 2, L0455: 2, | .0764: 2, L.0662: 2,                  | 0768: 2, L0766: 2, | 0775: 2, L0655: 2, | H0520: 2, H0672 | .0746: 2, L0755: 2 | 0758: 2, L0759: 2, | .0595: 2, H0624: | H0171: 1, H0685: | H0661: 1, H0402: | S0046: 1, H0333: | F0109: 1, H0013: | S0280: 1, L0021: | H0590: 1, H0581: | H0374: 1, H0596: | L0471: 1, H0014: 1, | S0051: 1, S0003: |
| 07                 | <u>To</u>        | <u> </u>         | <u>01</u>      | <u>H</u>         | <u>3</u>          | 3                 | <u>3</u>             |                      | Ξ.                  | <u>4</u>           | _                | <u>3</u>            | OH.                 | <u>3</u>                              | 3                  | <u> </u>           | HO              | <u> </u>           | <u>3</u>           | <u>3</u>         | HC               | H                | <u>S</u>         |                  | <u>so</u>        | )H               | H                | <u>3</u>            | SO               |
|                    | **               |                  |                | _                |                   |                   |                      | 30 Lys-5 to Met-10,  | Lys-79 to           | Ser-145 t          |                  |                     |                     | _                                     | ,<br>              | ·                  |                 |                    |                    |                  |                  |                  |                  |                  |                  |                  |                  | ;                   |                  |
|                    | _                | -                | <u></u>        | •                | <del></del>       | -                 |                      | 399 - 2081 2530      |                     |                    |                  |                     |                     |                                       | _                  |                    |                 |                    |                    |                  |                  |                  |                  | <u></u>          |                  |                  | ."               | •                   |                  |
| _                  |                  |                  |                |                  |                   |                   |                      | 355 399              |                     |                    |                  |                     |                     |                                       |                    |                    |                 |                    |                    |                  |                  |                  |                  |                  |                  |                  | <u> </u>         |                     |                  |
|                    |                  |                  |                |                  |                   |                   |                      | 1006018              |                     |                    |                  |                     |                     |                                       |                    |                    |                 |                    |                    |                  |                  | ·· <u>·</u> ···  |                  |                  |                  |                  |                  |                     |                  |
|                    |                  |                  |                |                  |                   |                   |                      | HUSJI14              |                     |                    |                  |                     |                     | · · · · · · · · · · · · · · · · · · · |                    |                    |                 |                    |                    |                  |                  |                  |                  |                  |                  |                  |                  |                     |                  |

|                     |                     |                     |                     | -                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     | - 1-                |                     |                        |           |                     |                     |                     |                        |                       |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|------------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        |           |                     |                     |                     |                        |                       |                     |                     |                     |                     |                     |                     |                     |
| H0328: 1, H0617: 1, | H0040: 1, H0412: 1, | H0494: 1, H0641: 1, | L0761: 1, L0645: 1, | L0773: 1, L0521: 1, | L0375: 1, L0651: 1, | L0805: 1, L0776: 1, | L0526: 1, L0783: 1, | L0809: 1, L0789: 1, | L0666: 1, L0664: 1, | H0701: 1, L0352: 1, | H0547: 1, H0658: 1, | H0670: 1, H0648: 1, | H0651: 1, H0436: 1, | L0740: 1, L0754: 1, | L0752: 1, L0757: 1, | L0591: 1, L0592: 1 and | H0293: 1. | L0794: 2, L0776: 2, | L0745: 2, L0758: 2, | S0260: 2, S0142: 1, | L0500: 1 and H0648: 1. | L0534: 10, L0747: 10, | L0769: 8, L0751: 7, | L0592: 5, H0545: 4, | L0770: 4, L0761: 4, | L0438: 4, H0599: 3, | T0010: 3, H0553: 3, | L0646: 3, H0547: 3, | S0028: 3, H0101: 2, |
|                     |                     |                     |                     | ,                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Asn-1 to Arg-13.    |                     |                     |                        | Leu-25 to Phe-35,     | Lys-48 to Asp-54,   | Arg-62 to Phe-72,   | Tyr-92 to Leu-99.   |                     | * -                 | :                   |                     |
|                     | ,                   |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2531                | •                   |                     |                        | 2532                  |                     |                     |                     |                     |                     |                     | !                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | 4                   |                     |                     |                     |                     |                        |           | 411 - 509           |                     |                     |                        | 594 - 1136            |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 356                 |                     |                     |                        | 357                   |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1006055             |                     |                     |                        | 1006142               |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HMCDB21             |                     |                     |                        | HSDEY08               | -                   |                     |                     |                     |                     |                     |                     |

|                     |             |                     |          |                     | -           |                  |          |                  |                   |           |                  | _           |          |   |          |           |           |                  | -       |            |           |          |            |          |          |           | _         |             |          |
|---------------------|-------------|---------------------|----------|---------------------|-------------|------------------|----------|------------------|-------------------|-----------|------------------|-------------|----------|---|----------|-----------|-----------|------------------|---------|------------|-----------|----------|------------|----------|----------|-----------|-----------|-------------|----------|
|                     |             |                     |          |                     |             |                  |          |                  |                   |           |                  |             |          |   |          |           |           |                  |         |            |           |          | ٠          |          |          |           |           |             |          |
| :                   |             |                     | <u> </u> |                     |             |                  |          |                  |                   |           |                  | -           |          |   |          |           |           |                  |         |            |           |          |            |          |          |           |           | •           |          |
|                     |             |                     |          |                     |             |                  |          |                  |                   | ·         |                  |             |          |   |          |           |           |                  |         |            |           |          |            |          |          |           |           |             |          |
| ): 2,               | . 2,        | ,                   | .,2      |                     | .2,         | : 1,             | : 1,     | : <del>1</del> , | ): 1,             | 5: 1,     | 5: 1,            | 7: 1,       | 5: 1,    | l: 1 <b>,</b>                                     | 3: 1,    | 5: 1,     | ): 1,     | 7: 1,            | 8: 1,   | . 1,       | 1: 1,     | 8: 1,    | l: 1,      | 1: 1,    | 0: 1,    | 1,        | k 1,      | 3: 1,       | 5: 1,    |
| , H0050             | , L0794: 2, | , L0378             | L0752    | , L0758             | , L0603: 2  | H0295            | , S0418  | , \$0360         | , H0580           | l, H0156: | , H0700          | 1, H0457: 1 | , H0566: | 1, L0471:   | , H0083: | l, H0266: | l, S0250: | , H061'          | , H070  | , H0135: 1 | , H055    | , H0488: | , T0041: 1 | , H0561: | , H0130: | , L0639:  | , L0764:  | , L0768: 1  | , L0805: |
| H0546: 2, H0050: 2, | .0662: 2, I | L0774: 2, L0378: 2, | 380: 2,  | ,0755: 2, L0758: 2, | 50436: 2, ] | S0040: 1, H0295: | 0255: 1  | S0444: 1, S0360: | \$0408: 1, H0580: | H0559: 1  | H0575: 1, H0706: | H0253: 1    | H0562: 1 | H0081: 1  | H0373: 1 | S6028: 1  | H0271: 1  | H0428: 1, H0617: | 0124: 1 | S0366: 1   | H0087: 1, | H0264: 1 | H0623: 1   | H0429: 1 | H0132: 1 | .0796: 1, | .0667: 1, | .0765: 1,   | .0651: 1 |
| H                   | <u> </u>    | ī                   | <u>x</u> | <u> 7</u>           | <u>X</u>    | <u>8</u>         | <u> </u> | <u>X</u>         | Š                 | H         | H                | E           | H        | 王   | H        | Š         | <u> </u>  | H                | 프       | <u>x</u>   | <u>H</u>  | H        | 工          | 五        | 工        | 7         | <u> </u>  |             | J        |
|                     |             |                     |          |                     |             |                  |          |                  |                   |           |                  |             |          |   |          |           |           |                  |         |            |           |          |            |          |          |           |           |             |          |
|                     |             |                     |          |                     |             |                  |          |                  |                   |           |                  |             |          |   |          |           |           |                  |         |            |           |          |            |          |          |           |           |             |          |
|                     |             |                     |          |                     |             |                  |          | _                |                   |           | •                |             |          | <del>,                                     </del> |          |           |           |                  |         |            |           |          |            | •        |          |           | -         |             |          |
|                     |             |                     |          |                     |             |                  |          |                  |                   |           |                  | _           |          |   |          |           |           |                  |         |            |           |          |            |          |          |           |           |             |          |
|                     | ·           | -                   |          |                     |             |                  |          |                  |                   |           |                  |             |          |   |          |           |           | _                |         |            |           |          |            |          |          |           | -         |             |          |
|                     |             |                     |          |                     |             |                  |          |                  |                   |           |                  |             |          |   |          |           |           | _                |         |            |           |          |            | _        |          |           |           |             |          |
|                     |             |                     |          |                     |             |                  |          |                  |                   |           |                  |             |          |   |          |           |           |                  |         |            |           | ٠,       |            |          |          |           |           |             |          |
|                     |             |                     |          |                     |             |                  |          |                  |                   |           |                  |             |          |   |          |           |           |                  |         |            |           |          |            |          |          |           |           |             |          |
|                     |             |                     |          |                     |             |                  |          |                  |                   |           |                  |             |          |   |          |           |           | ٠                |         |            |           |          |            |          |          |           |           |             |          |
|                     |             |                     |          | _                   |             |                  |          |                  |                   |           |                  |             |          | <u></u>   |          |           |           |                  |         |            |           |          |            |          |          | ٠         |           | <del></del> |          |

| L0776: 1, L0636: 1,<br>L0809: 1, L0791: 1,<br>L0663: 1, L0666: 1,<br>L0663: 1, L0665: 1,<br>S0428: 1, H0693: 1,<br>H0690: 1, H0684: 1,<br>H0670: 1, H0684: 1,<br>H0648: 1, H0521: 1,<br>H0134: 1, H0436: 1,<br>L0742: 1, L0743: 1,<br>L0742: 1, L0748: 1,<br>L0742: 1, L0748: 1,<br>L07439: 1, L0777: 1,<br>L0780: 1, L0777: 1,<br>L0759: 1, S0031: 1, | L0748: 20, L0731: 10,<br>L0776: 7, L0766: 6,<br>L0752: 6, L0747: 6,<br>L0755: 5, L0740: 5,<br>L0755: 5, L0759: 5,<br>H0550: 4, L0769: 4,<br>L0438: 4, H0545: 3,<br>H0051: 3, H0135: 3,<br>L0662: 3, L0809: 3,<br>L0666: 3, H0624: 2,<br>H0685: 2, L0005: 2,<br>H0645: 2, H0013: 2,<br>S0346: 2, H0318: 2, |
|--|---|
|  | Ser-9 to Glu-18,<br>Asp-22 to Asp-30.   |
|  | 2533  |
|  | 41 - 172  |
|  | 358   |
|  | 1006215   |
|  | HOOJT92   |

|                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | · <del></del> ;     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | · ·                 |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     | 7                   |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     | _                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0597: 2, H0050: 2, | H0014: 2, H0553: 2, | H0040: 2, H0616: 2, | H0551: 2, S0344: 2, | S0002: 2, L0761: 2, | L0771: 2, L0650: 2, | L0806: 2, L0659: 2, | H0547: 2, H0539: 2, | H0696: 2, L0439: 2, | L0749: 2, L0756: 2, | L0605: 2, L0591: 2, | L0581: 2, L0362: 2, | H0171: 1, H0556: 1, | S0134: 1, S0218: 1, | H0583: 1, L0427: 1, | S0358: 1, H0580: 1, | H0208: 1, H0619: 1, | S0278: 1, H0369: 1, | H0549: 1, H0431: 1, | H0370: 1, H0333: 1, | H0427: 1, H0599: 1, | T0082: 1, H0421: 1, | H0052: 1, H0457: 1, | L0157: 1, H0024: 1, | H0687: 1, H0290: 1, | H0252: 1, T0006: 1, | H0644: 1, L0143: 1, | H0111: 1, H0165: 1, | H0674: 1, H0591: 1, | H0634: 1, H0488: 1, |
|                     |                     |                     |                     |                     | -                   | · .                 | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | <del></del>         |                     |                     |                     |                     |                     | -                   |                     |                     |                     | -                   |                     |                     |                     |                     | <del></del>         |                     |                     | ·                   |                     | <del>.</del>        |                     |                     | <del></del>         |                     |                     | •                   |                     |                     |
|                     | -                   |                     |                     |                     |                     | _                   |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|---------------------|---------------------|---------------------|---------------------|---|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|-----------------------------|------------------------|-----------|---------------------|---------------------|-----------------------|---------------------|----------------------------|---------------------|---------------------|---------------------|---------------------|
|                     | ·                   |                     |                     | _ |                     |                      |                     | •                   |                     |                     | •                   |                     |                     | ··                  |                      | •••                 |                     | -                           |                        |           |                     |                     |                       |                     | •                          |                     |                     | ,                   |                     |
| H0623: 1, H0059: 1, | S0112: 1, T0042: 1, | H0561: 1, H0646: 1, | H0652: 1, H0538: 1, |   | .0648: 1, L0768: 1, | .0803: 1, L.0775: 1, | .0375: 1, L0783: 1, | .0530: 1, L0367: 1, | .0663: 1, H0144: 1, | H0519: 1, H0682: 1, | H0659: 1, H0658: 1, | H0648: 1, H0651: 1, | S0378: 1, H0521: 1, | .0611: 1, S0028: 1, | .0750: 1, L.0779: 1, | .0777: 1, L0757: 1, | .0758: 1, S0196: 1, | H0542: 1, H0423: 1,         | H0422: 1, H0677: 1 and | H0506: 1. | L0770: 2, L0662: 2, | .4501: 2, H0521: 2, | L0731: 2, L0758: 2,   | I0351: 1, S0222: 1, | 10587: 1, H0687: 1,        | H0169: 1, H0412: 1, | .0805: 1, L0666: 1, | H0723: 1, H0691: 1, | Н0520: 1, Н0659: 1, |
| 11                  | S                   |                     | <u></u>             |   |                     | <u> </u>             |                     | <u> </u>            | <u></u>             |                     | <u>;;Li</u>         | <u>:11</u>          | <u>.</u>            | <u> </u>            |                      |                     | <u> </u>            | <u>. <del>     </del>  </u> | ·                      | 1         | Lys-54 to Asp-62,   | _                   | Gln-121 to Thr-134, L | _                   | Thr-190 to Asn-196. H0587: | <u>j-L-j</u>        | <u> </u>            |                     |                     |
|                     |                     |                     |                     |   |                     |                      |                     |                     | ,                   |                     |                     | -                   |                     |                     |                      | _                   |                     |                             |                        |           | 2534                |                     |                       |                     |                            |                     |                     |                     |                     |
|                     |                     |                     |                     |   |                     |                      | •                   |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     | •                           |                        |           | 1 - 669             |                     |                       |                     | ,                          |                     |                     |                     |                     |
|                     |                     |                     |                     |   |                     |                      |                     |                     |                     |                     |                     | _                   |                     |                     |                      |                     | ř                   |                             |                        |           | 359                 | _                   |                       |                     |                            |                     |                     |                     |                     |
|                     |                     |                     |                     |   |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                             |                        |           | 1006250             |                     |                       |                     |                            |                     |                     |                     |                     |
|                     |                     |                     |                     |   |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                             |                        |           | HNORE03             |                     |                       |                     |                            |                     |                     |                     |                     |

| S0330: 1, L0755: 1,<br>L0759: 1, H0707: 1,<br>L0608: 1, H0543: 1 and<br>H0423: 1. | L0776: 6, L0754: 6,<br>L0779: 4, H0486: 3,<br>L0665: 3, S0440: 2,<br>L0756: 2, L0731: 2,<br>L0758: 2, H0624: 1,<br>H0717: 1, H0738: 1,<br>H0717: 1, H0738: 1,<br>H0125: 1, S0376: 1,<br>S0360: 1, H0581: 1,<br>L0157: 1, L0471: 1,<br>S0250: 1, S0422: 1,<br>L0769: 1, L0805: 1,<br>L0776: 1, L0606: 1,<br>L0776: 1, L0606: 1,<br>L0778: 1, L0664: 1,<br>H0689: 1, H0672: 1,<br>H0689: 1, H0672: 1,<br>H0689: 1, H0672: 1,<br>H0732: 1, L0751: 1,<br>H0732: 1, L0751: 1,<br>L0777: 1, L0751: 1,<br>L0777: 1, L0751: 1,<br>L0777: 1, L0751: 1,<br>L0777: 1, L0751: 1,<br>L0779: 1, S0436: 1, | H0729: 1, S0300: 1,                    |
|---|---|--|
|   | Arg-8 to Ser-35,<br>Leu-40 to Cys-77.   | Leu-17 to Arg-37,<br>Pro-50 to Ser-77, |
|   | 2535  | 2536                                   |
| ·   | 117 - 1754  | 2 - 508                                |
|   | 360   | 361                                    |
|   | 1006317   | 1006399                                |
|   | HPCTS21   | HFATL31                                |

| H0462: 1, H0550: 1,<br>H0441: 1, H0333: 1,<br>H0618: 1, S0010: 1,<br>H0309: 1, H0032: 1,<br>H0673: 1, H0124: 1,<br>S0366: 1, S0036: 1,<br>L0637: 1, S3014: 1,<br>L0742: 1, L0743: 1,<br>L0740: 1, L0750: 1, | L0521: 2, H0624: 1,<br>H0539: 1 and H0555: 1.                | H0693:<br>S0366: 4<br>H0637: 3<br>H0672: 3<br>H0661: 1<br>H0428: 1<br>L0641: 1<br>L0655: 1<br>L0791: 1<br>L0663: 1<br>H0576: 1<br>L0663: 1 | AR052: 6, AR053: 5,<br>AR055: 3, AR089: 3, |
|---|--|--|--|
| Arg-85 to Gln-91,<br>Glu-148 to Glu-153.  | Gly-67 to Leu-76,<br>Cys-83 to Arg-89,<br>Glu-96 to Asn-102. | Gly-16 to Asn-31,<br>Ala-36 to Ser-41,<br>Glu-93 to Pro-100,<br>Lys-135 to Gln-140.  | Val-9 to Ser-15,<br>Phe-34 to Tyr-41,      |
|   | 2537   | 2538   | 2539                                       |
|   | 2 - 331  | 948 - 529  | 3 - 653                                    |
|   | 362  | 363  | 364  |
|   | 1006445  | 1006470  | 1006483                                    |
|   | HE2JĘ77  | HCBNX87  | HNTD168                                    |

|  |   | ·  |
|--|---|--|
| AR033: 3, AR096: 3,<br>AR061: 2, AR039: 2,<br>AR060: 2, AR104: 2<br>H0615: 3, H0393: 1,<br>H0441: 1, T0109: 1,<br>H0318: 1, H0570: 1,<br>H0566: 1, H0551: 1,<br>L0766: 1, L0761: 1,<br>L0764: 1, H0144: 1,<br>H0539: 1, H0696: 1,<br>L0744: 1, L0740: 1 and<br>L0777: 1.   | T0002: 1, H0164: 1 and L0761: 1.            | L0747: 6, L0754: 4,<br>L0752: 4, S0280: 3,<br>H0615: 3, L0766: 3,<br>L0809: 3, L0740: 3,<br>L0750: 3, L0740: 3,<br>L0750: 2, L0741: 2,<br>H0628: 2, H0648: 2,<br>S0426: 2, H0648: 2,<br>S0027: 2, L0779: 2,<br>L0757: 2, L0759: 2,<br>L0757: 2, L0759: 2,<br>L0485: 2, H0656: 1,<br>S0029: 1, S0356: 1,<br>S0358: 1, S0376: 1,<br>S04008: 1, H0580: 1, |
| Glu-59 to Glu-75, AR033: 3, AR099<br>Leu-94 to Asn-99, AR061: 2, AR103<br>Asp-142 to Cys-152,AR060: 2, AR10<br>Lys-166 to Leu-172, H0615: 3, H0393<br>Lys-188 to Asn-194, H0441: 1, T0109:<br>Pro-212 to Ala-217. H0318: 1, H0570:<br>H0625: 1, L0761:<br>L0766: 1, L0803:<br>L0744: 1, H0144:<br>H0539: 1, H0696:<br>L0744: 1, L0740: | 2540 Pro-11 to Phe-16,<br>Ala-59 to Asp-66. | Ala-9 to Leu-20, Arg-70 to Thr-75, Pro-129 to Gly-139.   |
|  | 2540  | 2541   |
|  | 19 - 327                                    | 1767 -<br>1321   |
|  | 365   | 366  |
|  | 1006512                                     | 1006635  |
|  | HTRAA05                                     | HMTAL96  |

|                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                   |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|-------------------|
| S0046: 1, H0645: 1, | S0222: 1, H0592: 1, | H0486: 1, H0427: 1, | H0042: 1, H0036: 1, | H0004: 1, H0581: 1, | H0434: 1, H0052: 1, | T0110: 1, H0545: 1; | S0051: 1, H0375: 1, | H0328: 1, L0483: 1, | H0030: 1, H0644: 1, | H0090: 1, H0551: 1, | H0100: 1, H0633: 1, | S0344: 1, S0002: 1, | L0761: 1, L0764: 1, | L0521: 1, L0363: 1, | ि | L0558: 1, L0659: 1, | L0782: 1, L0787: 1, | H0691: 1, H0658: 1, | H0651: 1, S0330: 1, | H0539: 1, S0380: 1, | H0518: 1, S0013: 1, | H0555: 1, S3014: 1, | L0748: 1, L0439: 1, | L0749: 1, L0758: 1, | S0031: 1, L0599: 1, | L0362: 1, S0196: 1 and | H0422: 1. | H0615: 2 and H0486: | 1.                |
|                     |                     |                     |                     | •                   |                     | -                   |                     |                     |                     |                     |                     | -                   |                     | -                   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | -         | Ile-3 to Ile-10,    | Pro-40 to Val-64. |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2542                |                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 55 - 246            |                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 367                 |                   |
|                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del>.</del>        | -                   |                     |   |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                        |           | 1006858             |                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HDTJP21             |                   |

|  |           | 182600,             | 232700,             | 602086,<br>602616                        | )                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     |                     |  |                     |                                      |                                      |
|--|-----------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|--|---------------------|--------------------------------------|--------------------------------------|
|  |           | 14q21               |                     |  |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     | ,                   |  |                     |                                      |                                      |
| H0539: 2   | H0615: 3  | L0748: 3, L0471: 2, | L0766: 2, L0752: 2, | S0358: 1, H0357: 1,<br>H0486: 1 H0270: 1 | H0575: 1, S0182: 1. | S0049: 1, T0067: 1, | H0412: 1, H0560: 1, | S0144: 1, S0326: 1, | H0538: 1, S0422: 1, | S0426: 1, L0764: 1, | H0660: 1, H0521: 1, | S0432: 1, L0740: 1, | L0751: 1, L0754: 1, | L0745: 1, L0747: 1, | L0777: 1, L0731: 1, | H0445: 1, L0608: 1 and | H0667: 1. | L0777: 4, L0517: 3, | L0740: 3, L0599: 3, | S0354: 2, H0615: 2, | L0521: 2, L0663: 2, | L0779: 2, L0591: 2,                    | T0002: 1, H0013: 1, | H0427: 1, H0553: 1,                  | H0038: 1, L0520: 1,                  |
| Glu-8 to Tyr-18,<br>Asn-29 to Lys-35,<br>Lys-62 to Ile-67,<br>His-88 to Pro-99 |           | Pro-11 to Phe-19,   | Phe-41 to Ser-54.   |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Glu-10 to Ser-19,   | His-41 to Lys-50,   | Glu-80 to Leu-86,   | Ser-142 to Leu-147, | Lys-153 to Lys-161, L0779: 2, L0591: 3 | Tyr-167 to Leu-175, | Ser-177 to Asn-188, H0427: 1, H0553: | Gln-199 to Arg-228, H0038: 1, L0520: |
| 2543   | 2544      | 2545                |                     |  |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2546                |                     |                     |                     |  |                     |                                      |                                      |
| 298 - 2  | 334 - 393 | 290 - 571           |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 3 - 1016            |                     |                     |                     |  |                     |                                      |                                      |
| 368  | 369       | 370                 |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 371                 |                     | -                   |                     |  |                     |                                      |                                      |
| 1006943  | 1006953   | 1007230             | ,                   |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                      | •         | 1007941             |                     |                     |                     |  |                     |                                      |                                      |
| HISEQ81  | HODFH02   | HOCPP18             |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                        |           | HODFP91             |                     |                     |                     |  |                     |                                      |                                      |

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|   |  |   |   |
| L0769: 1, L0638: 1,<br>L0518: 1, L0809: 1,<br>H0547: 1, L0439: 1,   | H0686: 1, H0559: 1<br>and S0028: 1.  | AR053: 1, AR104: 1, AR060: 0, AR033: 1, AR050: 0, AR089: 0, AR052: 0, AR089: 0, AR052: 0, AR089: 4, AR060: 4, AR055: 4, AR061: 3, AR055: 4, AR061: 3, AR053: 3, AR104: 3, AR053: 3, AR104: 1, H0596: 1 and S0354: 2, S0360: 1, H0036: 1, H0596: 1 and S0374: 1. | Glu-26 to Gly-31, AR052: 51, AR061:<br>Gly-33 to Trp-40, 46, AR033: 35, AR053:<br>Ala-169 to Glu-175, 28, AR104: 26, AR055: |
| Gln-257 to Glu-262, L0769: 1, L0638: 1, Asp-274 to Ser-279. L0518: 1, L0809: 1, H0547: 1, L0439: 1, 10747: 1, and H0444 | Pro-6 to Leu-11,<br>Glu-90 to Asn-95,<br>Val-102 to Val-107,<br>Ala-120 to Glu-126,<br>Ala-132 to Thr-144. |   | Glu-26 to Gly-31,<br>Gly-33 to Trp-40,<br>Ala-169 to Glu-175,   |
|   | 2547   | 2548  | 2550  |
|   | 18 - 449   | 81 - 1334   | 3 - 752   |
|   | 372  | 373   | 375   |
|   | 1007976  | 1008013   | 1008071   |
|   | н6ЕDU06  | HPCRD26   | HPASD51   |

|   |    | :                   |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                               |                     | •                   | •                   |                     |                     |                     |                     | •                   |                     |                     |
|---|----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 12                  |                     |                     |                     |                     |                               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Gly-199 to Gly-204. 25, AR096: 25, AR060: 24, AR089: 23, AR039: | 21 | S0380: 5, L0748: 4, | H0648: 3, S0378: 3, | L0752: 3, L0766: 2, | L0803: 2, L0665: 2, | L0750: 2, H0661: 1, | H0461: 1, H0270: 1, | H0039: 1, H0622: 1, | L0761: 1, L0657: 1, | L0532: 1, L0666: 1, | H0689: 1, S0330: 1, | L0749: 1 and L0777: 1. | L0803: 5, L0439: 5, | L0750: 5, L0774: 4, | H0657: 3, H0046: 3, |                     | L0773: 3, L0794: 3, | L0776: 3, L0655: 3,           | L0657: 3, L0790: 3, | L0438: 3, L0747: 3, | L0731: 3, H0656: 2, | T0042: 2, L0761: 2, | L0764: 2, L0654: 2, | S0152: 2, L0751: 2, | L0749: 2, L0777: 2, | L0759: 2, L0592: 2, | H0543: 2, S6024: 1, | H0341: 1, S0212: 1, |
| Gly-199 to Gly-204.   |    |                     |                     |                     |                     |                     |                     |                     | -                   |                     | ٠                   |                        | Gly-28 to Pro-34,   | Lys-39 to Glu-47,   | Ala-63 to Cys-68,   | Asn-101 to Gly-111, | Leu-144 to His-161, | Asp-234 to Trp-245, L0776: 3, | Phe-396 to Ser-407. |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2551                |                     |                     |                     |                     |                               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |    | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 95 - 1315           |                     | ,                   |                     |                     |                               | •                   |                     |                     |                     |                     |                     | ار                  |                     |                     |                     |
|   |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 376                 |                     |                     |                     |                     |                               |                     |                     |                     |                     |                     |                     |                     |                     | :                   |                     |
|   |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1008154             |                     |                     | •                   |                     |                               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HC0QH27             |                     |                     |                     |                     |                               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| 22.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2  | 6: 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,                    |
| S0420: 1, S0358: 1<br>S0360: 1, S0410: 1<br>H0637: 1, H0208: 1<br>H0393: 1, S0278: 1<br>H0393: 1, S0278: 1<br>H039: 1, H0441: 1<br>H0427: 1, H0613: 1<br>H0209: 1, H0123: 1<br>H0209: 1, H0123: 1<br>H0209: 1, H0123: 1<br>H0209: 1, H0123: 1<br>H0266: 1, H0553: 1<br>H0266: 1, H0553: 1<br>H0264: 1, L0766: 1<br>L0643: 1, L0766: 1<br>L0643: 1, L0766: 1<br>L0643: 1, L0766: 1<br>L0375: 1, L0638: 1<br>L0375: 1, L0638: 1<br>L0643: 1, L0766: 1<br>L0375: 1, L0638: 1<br>L0771: 1, L0638: 1<br>L0771: 1, L0638: 1<br>L0771: 1, L0638: 1<br>L0771: 1, L0638: 1<br>L0771: 1, L0663: 1<br>H0660: 1, H0670: 1   | H0696: 1, H0704:<br>S0044: 1, L0756: 1<br>L0757: 1, L0758: 1 |
| 50420: 1, S<br>50360: 1, S<br>50360: 1, S<br>50045: 1, S<br>60045: 1, S<br>6039: 1, 1<br>60357: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: 1, S<br>60010: | , 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,                     |
| S0420: 1, S0358: S0360: 1, S0410: H0637: 1, H0208: S0045: 1, S0046: H0359: 1, S0278: H0369: 1, H0641: H0357: 1, H0613: H0427: 1, H0613: H0209: 1, H0123: H0209: 1, H0123: H0209: 1, H0123: H0209: 1, H0123: H0209: 1, H0551: H0209: 1, H0551: H0266: 1, H0551: H0264: 1, H0551: L0475: 1, L0766: L0804: 1, L0775: L0775: 1, L0805: L0791: 1, L0663: S0126: 1, H0672: H0660: 1, H0672:   | H069<br>S004   |
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|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|----------|---------------------|
|                     |                     |                        |           |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     | ٠                   |                     |                    |          |                     |
|                     |                     |                        | _         |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |          |                     |
|                     |                     |                        |           |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |          | Į                   |
|                     |                     |                        |           |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |          |                     |
| L0588: 1, L0591: 1, | .0485: 1, H0542: 1, | H0423: 1, H0422: 1 and | H0293: 1. | L0770: 7, L0777: 7, | S0406: 5, L0439: 5, | L0758: 4, H0659: 3, | H0717: 2, H0494: 2, | ,0598: 2, L.0764: 2, | .0655: 2, H0547: 2, | H0521: 2, H0478: 2, | .0748: 2, L0731: 2, | .0595: 2, L0411: 1, | H0657: 1, H0656: 1, | H0663: 1, S0358: 1, | H0329: 1, H0645: 1, | H0639: 1, H0415: 1, | H0455: 1, H0156: 1, | L0021: 1, H0052: 1, | r0110: 1, L0471: 1, | H0687: 1, S0250: 1, | H0428: 1, H0553: 1, | H0166: 1, H0598: 1, | H0040: 1, H0551: 1, | S0386: 1, H0560: 1, | H0509: 1, H0538: 1, | INKWN: 1, L0763: 1, | 0638: 1, L0646: 1, |          | .0803: 1, L0659: 1, |
| 13                  | <u>3</u>            | Ħ                      | 国         |                     |                     |                     |                     | <u> </u>             | <u>김</u>            | Ħ                   | 2                   | 2                   | Ħ                   | Ħ                   | Ħ                   | 耳                   | Ħ                   | 2                   | 2                   | Ħ                   | Ħ                   | 五                   | 王                   | 80                  | 王                   | 5                   | <u>고</u>           | <u> </u> | 길                   |
|                     |                     |                        |           | Leu-40 to Val-46,   | Gly-83 to Gln-89,   | Lys-123 to Gly-129. | •                   |                      | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |          |                     |
|                     |                     |                        |           | 2552                |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    | ٠.       |                     |
|                     |                     |                        | •         | 2 - 2737            |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |          |                     |
|                     |                     |                        |           | 377                 |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                    |          |                     |
|                     |                     |                        |           | 1008177             |                     |                     |                     | •                    |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    | •        |                     |
|                     |                     | ,                      |           | HNTBU30             |                     |                     |                     |                      |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |          |                     |

|   | 114208,<br>114208,                         | 119300,             | 120620,             | 120620,             | 120920,             | 134370,             | 134370,             | 134370,             | 134580,             | 145260,                | 150310, | 150310, | 179820, | 191045, | 276901, | 600105, | 600332, | 600759, | 601494, |
|---|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|   | 1q32-q41                                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |         |         |         |         |         |         |         | ;       |         |
| L0636: 1, L0783: 1,<br>L0666: 1, H0520: 1,<br>H0519: 1, S0122: 1,<br>H0435: 1, H0518: 1,<br>H0694: 1, H0555: 1,<br>H0436: 1, L0747: 1,<br>L0749: 1, L0779: 1,<br>L0752: 1, L0755: 1,<br>S0031: 1, L0485: 1,<br>H0422: 1 and H0506: 1. | H0556: 3, S0474: 2,<br>H0622: 2, H0634: 2. | S0434: 2, H0265: 1, | H0254: 1, H0663: 1, | S0046: 1, H0602: 1, | H0586: 1, H0069: 1, | H0575: 1, H0581: 1, | H0251: 1, S0051: 1, | H0617: 1, H0494: 1, | H0670: 1, S0152: 1, | L0748: 1 and L0603: 1. | -       |         |         |         |         |         |         |         | •       |
|   |  |                     |                     |                     |                     |                     |                     |                     |                     |                        |         |         |         |         |         |         |         |         |         |
|   | 2553                                       |                     | ,                   |                     |                     |                     |                     |                     |                     |                        |         |         |         |         |         |         |         | -       |         |
|   | 763 - 1083                                 |                     |                     |                     |                     |                     |                     |                     |                     |                        | •       |         |         |         |         |         |         | ٠       |         |
|   | 378  |                     |                     |                     |                     |                     |                     |                     |                     |                        |         |         |         |         |         |         |         |         |         |
|   | 1008179                                    |                     |                     |                     |                     |                     | •                   |                     |                     |                        |         |         |         |         |         |         |         |         |         |
|   | HCOPZ14                                    |                     |                     |                     |                     | ·                   |                     |                     |                     |                        |         |         |         |         |         |         |         |         |         |

| 744,<br>975      | 112410,<br>135700,                         | 168470,             | 200990                               |                                      |                                      |  |                     | <del></del>         |                     |                  |                     |                     |                     |                     |                     |                        |                  |                   |                   |                  |                   |                   |                   |                     |                     |                     |                     |
|------------------|--|---------------------|--------------------------------------|--------------------------------------|--------------------------------------|--|---------------------|---------------------|---------------------|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|---------------------|---------------------|---------------------|---------------------|
| 601744<br>601975 | 112  | 168                 | 8                                    |                                      |                                      |  |                     |                     |                     |                  |                     |                     |                     |                     |                     |                        |                  |                   |                   |                  |                   |                   |                   |                     |                     |                     | $\dashv$            |
|                  | 12p11.2-<br>p11.1                          |                     |                                      |                                      |                                      |  |                     |                     |                     |                  | •                   |                     |                     |                     |                     |                        |                  |                   |                   |                  |                   |                   |                   |                     |                     | :                   |                     |
|                  | H0615: 2, L0766: 2,<br>L0755: 2, L0471: 1, | H0356: 1, T0023: 1, | L0761: 1, L0794: 1,                  | L0787: 1, L0789: 1,                  | H0519: 1, L0745: 1,                  | Tyr-280 to Arg-287, L0746: 1, L0591: 1 and | L0593: 1.           | •                   |                     | H0615: 1         | L0805: 2, S0134: 1, | H0486: 1, H0251: 1, | H0235: 1, S0022: 1, | H0615: 1, L0667: 1, | L0776: 1, L0789: 1, | L0758: 1 and H0423: 1. | H0615: 1         |                   | •                 | H0615: 3         |                   |                   |                   |                     |                     | L0776: 9, L0769: 4, | L0789: 4, L0773: 3, |
|                  | Arg-1 to Cys-8,<br>Ala-11 to Thr-22,       | Pro-87 to Leu-99,   | Lys-120 to Glu-144, L0761: 1, L0794: | Leu-179 to Lys-200, L0787: 1, L0789: | Glu-212 to Lys-221, H0519: 1, L0745: | Tyr-280 to Arg-287,                        | Lys-292 to Gly-299, | Val-314 to Ser-320, | Pro-322 to Pro-340. | His-8 to Gly-18. | Lys-54 to Arg-59,   | Arg-66 to Arg-71.   |                     |                     |                     |                        | Thr-4 to Ser-11, | Pro-25 to Ala-31, | Thr-38 to His-44. | Ser-2 to Thr-13, | Ile-16 to Ser-26, | Pro-28 to Gln-36, | Gln-41 to Pro-47, | Pro-106 to Asp-111, | Trp-127 to Thr-132. | Ser-2 to Ser-7,     | Leu-51 to Arg-56,   |
|                  | 2554                                       |                     |                                      |                                      |                                      |  | •                   |                     |                     | 2555             | 2556                |                     |                     |                     |                     |                        | 2557             |                   |                   | 2558             |                   |                   |                   |                     |                     | 2559                |                     |
|                  | 1 - 1209                                   |                     |                                      |                                      |                                      |  |                     |                     |                     | 26 - 169         | 369 - 671           |                     |                     |                     |                     | ,                      | 3 - 218          |                   |                   | 3 - 416          |                   |                   |                   |                     |                     | 244 - 1206          |                     |
|                  | 379  |                     |                                      |                                      |                                      | •  |                     |                     |                     | 380              | 381                 |                     |                     |                     |                     |                        | 382              |                   |                   | 383              |                   |                   |                   |                     |                     | 384                 |                     |
|                  | 1008299                                    |                     |                                      |                                      |                                      |  |                     |                     |                     | 1008304          | 1008307             |                     |                     |                     |                     |                        | 1008314          |                   |                   | 1008324          |                   |                   |                   | •                   |                     | 1008325             |                     |
|                  | HODEC78                                    |                     |                                      |                                      |                                      |  |                     |                     |                     | HODEF29          | HODFB71             |                     |                     |                     |                     |                        | HODEF78          |                   |                   | HODEL83          |                   |                   |                   |                     |                     | HHPSH76             |                     |

|                        |                        |                        | ,                   |                     |                     |                     |                     |                     |                      |                    |                      |                     |                     |                     |                    |                        |                     |                      |                    |                     |                     |                        |                     |                     |                        |           |                     |                     |                     |
|------------------------|------------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|--------------------|----------------------|---------------------|---------------------|---------------------|--------------------|------------------------|---------------------|----------------------|--------------------|---------------------|---------------------|------------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|
|                        |                        |                        |                     |                     |                     |                     |                     |                     |                      |                    |                      |                     |                     |                     |                    |                        |                     |                      |                    |                     |                     |                        |                     |                     |                        | •         |                     | . :                 |                     |
| -                      | •                      |                        | ·                   |                     |                     |                     | •                   |                     |                      |                    |                      |                     |                     | -                   |                    |                        |                     |                      |                    |                     |                     |                        |                     | -                   |                        |           |                     |                     |                     |
|                        |                        |                        |                     |                     |                     |                     |                     |                     |                      |                    |                      |                     |                     |                     |                    |                        |                     |                      |                    |                     |                     |                        |                     | ٠,                  |                        |           |                     |                     |                     |
| L0774: 3, L0750: 3,    | .0761: 2, L0771: 2,    | L0803: 2, L0807: 2,    | L0565: 2, L0745: 2, | S0376: 1, H0549: 1, | H0453: 1, H0587: 1, | S0010: 1, S0324: 1, | H0201: 1, H0687: 1, | 10428: 1, H0538: 1, | .0763: 1, L.0770: 1, | 0800: 1, L0643: 1, | .0764: 1, L.0794: 1, | .0766: 1, L0775: 1, | ,0806: 1, S0328: 1, | H0521: 1, L0780: 1, | 0758: 1, L0759: 1, | ,0605: 1 and S0462: 1. | H0181: 2, L0599: 2, | H0014: 1, L0365: 1,  | 0665: 1, S0052: 1, | S0216: 1, H0684: 1, | S0152: 1, S0188: 1, | H0345: 1 and L0366: 1. | H0551: 2, S0354: 1, | H0229: 1, S0049: 1, | H0135: 1, H0529: 1 and | S0028: 1. |                     |                     |                     |
| Lys-142 to Ser-149, LO | His-178 to Ser-187, LO | Tyr-261 to Gly-267, L0 | _                   |                     | )H                  | 0 <u>S</u>          | H                   | )H                  | 3                    | 3                  | <u> </u>             | 3                   | <u>3</u>            | )H                  | 7                  | <u>1</u>               | Gly-1 to Glu-26, F  | Val-28 to Leu-35. H( | 3                  | <u>S</u>            | SC                  | <u>岜</u>               | Asn-40 to Arg-68, I |                     | lle-129 to Lys-145, H( |           | Glu-181 to Thr-204, | Ser-206 to Lys-214, | Leu-222 to Thr-231. |
|                        |                        |                        |                     |                     |                     | -                   |                     |                     |                      | -                  |                      |                     |                     |                     |                    |                        | 2560                |                      |                    |                     |                     |                        | 2561                | -                   |                        |           |                     | ,                   |                     |
|                        |                        |                        |                     |                     |                     |                     |                     |                     |                      |                    |                      |                     |                     |                     |                    |                        | 782 - 663           | ,                    |                    |                     |                     |                        | 3 - 737             | -                   |                        |           |                     | <i>:</i>            |                     |
|                        |                        |                        | ,                   |                     |                     |                     |                     |                     | •                    |                    |                      |                     |                     |                     |                    |                        | 385                 |                      |                    |                     |                     |                        | 386                 |                     |                        |           |                     |                     |                     |
|                        |                        | -                      | •                   | ·                   |                     |                     |                     | -                   |                      |                    |                      |                     |                     |                     |                    | <u> </u>               | 1008326             |                      |                    |                     | -                   |                        | 1008327             |                     |                        |           |                     |                     |                     |
|                        | ,                      |                        |                     |                     |                     |                     |                     |                     |                      |                    |                      |                     |                     |                     |                    |                        | HBGBE52             |                      |                    |                     |                     |                        | HBQAB30             |                     |                        |           |                     |                     |                     |

| 114835,               | 118470,             | 132700,             | 172490,             | 209900,             | 896009              |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                        |           |
|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|
| 16q13-                | 16q21               |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                        |           |
| L0750: 4, L0777: 3,   | L0758: 3, S0354: 2, | S0360: 2, H0039: 2, | H0622: 2, H0617: 2, | L0666: 2, H0520: 2, | L0756: 2, L0759: 2, | S0358: 1, H0549: 1, | H0253: 1, H0009: 1, | L0471: 1, H0620: 1, | H0024: 1, H0083: 1, | H0688: 1, L0142: 1, | H0135: 1, H0038: 1, | H0100: 1, H0646: 1, | L0763: 1, L0761: 1, | L0764: 1, L0662: 1, | L0767: 1, L0794: 1, | L0653: 1, L0659: 1, | L0809: 1, L0665: 1, | H0144: 1, H0547: 1, | H0672: 1, L0741: 1, | L0743: 1, L0744: 1, | L0753: 1 and S0276: 1. | H0670: 4, S0007: 2, | H0014: 2, H0616: 2, | L0005: 1, H0574: 1, | H0632: 1, H0156: 1, | H0169: 1, L0769: 1, | L0805: 1, L0647: 1, | H0648: 1, L0779: 1 and | L0758: 1. |
| 2562 Asn-7 to Lys-19. | •                   |                     | :                   |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                        | Thr-5 to His-10,    | Pro-28 to Thr-40,   | Lys-46 to His-54.   |                     |                     |                     |                        |           |
| 2562                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                        | 2563                |                     |                     |                     |                     |                     |                        |           |
| 1 - 558               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 22 - 216            |                     |                     |                     |                     |                     |                        |           |
| 387                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                        | 388                 |                     |                     |                     |                     |                     |                        |           |
| 1008332               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     | ٠                   |                     |                     |                        | 1008335             |                     |                     |                     |                     |                     |                        | ,         |
| HLHCB31               |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HPFDV51             |                     |                     |                     |                     |                     |                        |           |

|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                        |           |                  |                   |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|------------------|-------------------|---------------------|
| 118210,             | 120550,             | 120570,             | 120575,             | 121800,             | 130500,             | 133200,             | 171760,             | 171760,             | 185470,             | 230350,             | 255800,             | 602771              |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     | ,                      | 3         |                  |                   |                     |
| 1p35.1              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                  |                   |                     |
| L0803: 8, L0758: 8, | L0809: 6, L0748: 6, | H0038: 5, L0439: 5, | H0616: 4, H0670: 4, | L0756: 4, L0731: 4, | L0794: 3, L0750: 3, | L0770: 2, L0805: 2, | L0776: 2, L0602: 2, | L0779: 2, S0276: 2, | S0282: 1, S0410: 1, | H0369: 1, H0549: 1, | H0618: 1, H0252: 1, | H0615: 1, H0424: 1, | H0213: 1, H0032: 1, | H0212: 1, H0068: 1, | T0067: 1, S0438: 1, | L0769: 1, L0638: 1, | L0804: 1, L0775: 1, | L0806: 1, L0527: 1, | L0782: 1, L0788: 1, | L0789: 1, L0666: 1, | L0664: 1, L0665: 1, | H0658: 1, H0672: 1, | S3012: 1, L0751: 1, | L0745: 1, L0777: 1, | L0780: 1, L0759: 1 and | L0581: 1. | H0615: 3         |                   | H0663: 1, H0125: 1, |
| Arg-2 to Gly-9,     | ý                   |                     | Asp-79 to Ala-84,   | 9,                  |                     | Glu-216 to Ala-231, |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                        |           | Gln-2 to His-10, | Lys-21 to Glu-33. |                     |
| 2564                |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ł                   |                     |                     |                     |                     |                        |           | 2565             |                   | 2566                |
| 2 - 832             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     | ,                   |                     | •                   |                        |           | 2 - 166          | •                 | 109 - 435           |
| 389                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 390              | •                 | 391                 |
| 1008336             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1008337          |                   | 1008345             |
| HTEDY04             |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                        |           | HODEG13          | •                 | HHPFK16             |

|                     |                                  |                                       | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |
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|                     |                                  |                                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |
|                     |                                  | ,                                     |                     |                     | <del></del> ,       |                     |                     |                     |                     |                     | •                   |                     |                     | .,                  |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     | ,                   |                        |
|                     |                                  |                                       |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |
| S0418: 1, S0356: 1, | H0051: 1, H0648: 1 and H0543: 1. | L0752: 6, L0663: 5,                   | L0747: 3, H0031: 2, | L0794: 2, H0659: 2, | H0658: 2, L0748: 2, | H0556: 1, H0657: 1, | L0005: 1, S0354: 1, | S0358: 1, S0410: 1, | H0637: 1, H0441: 1, | H0455: 1, T0082: 1, | H0615: 1, S0440: 1, | H0633: 1, S0344: 1, | S0426: 1, H0529: 1, | L0770: 1, L0769: 1, | L0637: 1, L0374: 1, | L0771: 1, L0648: 1, | L0662: 1, L0766: 1, | L0650: 1, L0774: 1, | L0775: 1, L0805: 1, | L0776: 1, L0655: 1, | L0542: 1, L0782: 1, | L0809: 1, L0666: 1, | L0664: 1, L0665: 1, | L0352: 1, H0648: 1, | H0521: 1, H0696: 1, | S0406: 1, L0740: 1, | L0749: 1, L0731: 1 and |
|                     |                                  | Ser-24 to Ala-30,<br>Arg-55 to Ser-62 |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |
|                     |                                  | 2567                                  |                     |                     |                     |                     | ,                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                        |
|                     |                                  | 220 - 20                              |                     |                     |                     | •                   |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | *                   |                     | :                   |                        |
|                     |                                  | 392                                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                        |
|                     |                                  | 1008349                               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | •                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                        |
|                     |                                  | HARAL81                               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |

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|-----------|--|---|--|-----------------------|
|           |  |   | :  |                       |
| H0444: 1. | S0360: 2, H0123: 2,<br>L0649: 2, L0803: 2,<br>L0747: 2, L0740: 2,<br>L0747: 2, L0750: 2,<br>L0755: 2, H0624: 1,<br>S0418: 1, H0393: 1,<br>H0553: 1, H0124: 1,<br>H0646: 1, S0142: 1,<br>L0662: 1, L0776: 1,<br>L0659: 1, L0665: 1,<br>L0438: 1, H0649: 1,<br>H0658: 1, H0648: 1,<br>L0777: 1, L0752: 1,<br>H0445: 1, L0599: 1, | S0242: 1 and H0542: 1.<br>H0046: 2 and H0648:<br>1. | L0747: 4, L0751: 3,<br>H0615: 2, L0794: 2,<br>L0665: 2, H0659: 2,<br>L0777: 2, L0596: 2,<br>H0341: 1, H0333: 1,<br>H0510: 1, H0328: 1,<br>H0039: 1, L0764: 1,<br>L0657: 1, H0658: 1,<br>S0328: 1 and L0758: 1. | H0360: 14, L0809: 11, |
|           |  | Thr-5 to Ser-12,<br>Thr-74 to Pro-80.               | His-31 to Asp-45,<br>Glu-56 to Ser-64,<br>Pro-118 to Asp-131.  | Thr-25 to Ser-36.     |
|           | 2568   | 2569  | 2570   | 2571                  |
|           | 987 - 1100   | 3 - 377   | 1 - 495  | 3 - 455               |
|           | 393  | 394   | 395  | 396                   |
|           | 1008350  | 1008358   | 1008359  | 1008372               |
|           | HFTAU42  | HETDA81   | HODEI92  | HODEB58               |

| 10747: 9, 10749: 9, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 4, 10771: 3, 10771: |          | <u>.                                    </u> |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             |          |
|--|----------|--|--------|----------|-----------|--------|----------|-------|-------|-------|---------------|------------|-------|----------|-------|----------|-------|----------|--------|--------|-------|-------|----------|--------|-----------|----------|---------------|-------|-------------|----------|
| LU747: 9, L0749: 9, L0774: 7, L0774: 7, L0774: 7, L0774: 7, L0774: 7, L0774: 6, S0408: 3, L0774: 7, L0774: 6, S0408: 3, L0778: 3, L0775: 4, L0775: 4, L0775: 4, L0775: 4, L0775: 4, L0775: 4, L0775: 4, L0775: 3, L0778: 3, S0406: 3, L0778: 3, S0406: 3, L0779: 3, L0779: 3, S0406: 3, L0779: 3, S0406: 2, L0779: 3, S0406: 2, L0779: 3, L0779: 3, L0779: 3, L0779: 3, L0779: 2, L0779: |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             |          |
| L0777: 9, L0749: 9, L0777: 9, L0703: 8, L0771: 8, L0774: 7, L0794: 6, S0408: 5, L0738: 5, L0775: 4, L0738: 5, L0775: 4, L0738: 5, L0775: 4, L0738: 1, L0775: 4, L0738: 3, L0771: 3, H0576: 4, L0623: 3, H0576: 3, L0768: 3, S0406: 3, L0778: 3, S0116: 2, S0444: 2, S0360: 2, H0578: 3, S0116: 2, S0444: 2, S0360: 2, H0578: 3, S0116: 2, L0768: 2, L0769: 2, L0768: 2, L0769: 2, L0768: 2, L0769: 2, L0768: 2, L0769: 1, L0769: 1, H0518: 1, L0769: 1, H0618: 1, L0769: 1, H0618: 1, L0769: 1, H0618: 1, L0769: 1, H0618: 1, L0769: 1, H0618: 1, L0769: 1, H0618: |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             |          |
| LU777: 9, LU749: 9, LU777: 1, LU794: 6, 10803: 8, LU773: 1, LU774: 7, LU794: 6, S0408: 5, LU778: 4, LU648: 4, LU778: 4, LU648: 4, LU648: 4, LU778: 3, LU771: 3, HU775: 3, LU771: 3, HU775: 3, LU771: 3, HU775: 3, LU771: 3, S0406: 3, LU768: 3, S0444: 2, S0360: 2, HU776: 2, LU778: 2, HU778: 2, LU778: 1, HU778: 2, LU778: 1, HU778: |          |  |        |          |           |        |          | _     |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       | <del></del> |          |
| L0777: 9, L0779: 9, L07775: 4, L07775: 4, L07781: 8, L07775: 4, L07381: 5, L07775: 4, L07381: 5, L07775: 4, L07381: 5, L07775: 4, L07381: 5, L07775: 4, L07381: 4, H06481: 4, L07381: 4, H06775: 3, L07713: 3, H06775: 3, L07713: 3, H06775: 3, L07713: 3, H06775: 3, L07713: 3, H06775: 3, L07713: 3, H06775: 3, L07719: 3, L07381: 3, H067779: 3, L07381: 3, H06781: 2, H06381: 2, H06781: 2, H06781: 2, H06781: 2, H06781: 2, H06781: 2, H06781: 2, L07779: 2, L |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       | ٠        |        |        |       |       |          |        |           |          | •             |       |             |          |
| L0747: 9, L0749: 9, L0773: 8, L0774: 7, L073: 8, L0777: 4, L073: 8, L0777: 4, L073: 8, L0777: 4, L073: 8, L0777: 4, L073: 8, L0777: 4, L073: 8, L0777: 4, L073: 8, L0777: 4, L073: 8, L0777: 4, L073: 1, L0777: 4, L073: 1, L0777: 4, L073: 1, L0777: 4, L074: 2, L0777: 3, L076: 2, L0779: 3, L076: 2, L076: 2, L076: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077: 2, L076: 2, L077 |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             |          |
| L0747: 9, L0749: C 10731: 8, L0774: 9, L0749: C 10731: 8, L0774: 1, L0731: 8, L0774: 1, L0731: 8, L0774: 1, L0731: 8, L0774: 1, L0731: 1 | <u>,</u> | ~ <b>`</b>                                   | ~      |          | <b>ئد</b> | ₽,     |          | χ,    | ω,    | ~.    | `. <b>.</b> ^ | ~ <b>`</b> | ລຳ    | ٠,       | ۷,    | 2,       | 2,    | <b>,</b> | ~ໂ     | ~į.    | 2,    | ્યું  | حر<br>ر  | ~ຳ     | ر<br>د    | ั~เ์     | . <del></del> | 1,    | 1,          |          |
| L0747: 9, L0 L0777: 9, L0 L0771: 9, L0 L0731: 8, L0 L0731: 8, L0 L0731: 8, L0 L0731: 5, L0 L0731: 5, L0 L0731: 5, L0 L0731: 5, L0 L0751: 3, L0 L0751: 3, L0 L0751: 3, L0 L0751: 3, L0 L0751: 3, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 2, L0 L0761: 1, R0 L0761 | 749: 9   | 803: 8                                       | 774: 7 | 408: 5   | 775: 4    | 648: , | 623:     | 471:  | )615: | 768:  | 328: 3        | 779:       | 116:2 | 360: 2   | 222:  | 082:     | 3014: | 440.     | 769: 7 | 517: 2 | 3670: | 539:  | 753: 3   | 759: 3 | 588: 2    | 595:     | 171:          | )218: | 342:        | 049      |
| L0747: L0731: L0731: L0733: L0743: L0743: L0743: L0756: L0757: L0758: L0764: L0764: L0767: L0 | 9, 1.0   | 9, L0  | 8, LO  | 6, 50    | 5, LO     | 4, H0  | 4, I.0   | 3, LO | 3, H( | 3,10  | 3, S0         | 3, LO      | 3, S0 | 2, S0    | 2, S0 | 2, TC    | 2, H( | 2, S0    | 2, L0  | 2,10   | 2, H( | 2, H( | 2, L0    | 2, 1:0 | 2,10      | 2,10     | 2, HC         | 1, H( | 1, SC       | 1, T0    |
|  | 3747:    | 0777:  | 0731:  | 0794:    | 0783:     | 0438:  | 0756:    | 0575: | 0373: | 0520: | 0126:         | 9406:      | 0758: | 244      | 0393: | 0156:    | 0052  | 0494:    | 0763:  | 0764:  | 0684: | 0672  | 0740:    | 0757:  | 0031:     | 0581:    | 0424:         | 0002: | 0685        | 9402:    |
|  | 크        |  | 7      | <u> </u> | 그         | ĭ      | <u> </u> | H     | 프     | 그     | <u>x</u>      | Ø          |       | <u>x</u> | 王     | <u> </u> | 프     | 프        | 그      | 크      | 王     | 工     |          | H      | <u>\S</u> | <u> </u> | Š             | H     | 프           | <u>~</u> |
|  |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             |          |
|  |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             |          |
|  |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        | •     |       |          |        |           |          |               |       |             |          |
|  |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             | •        |
|  |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       | <u>-</u> |        |           |          |               |       |             |          |
|  |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             |          |
|  |          |  |        |          |           |        |          | _     |       |       |               |            | _     |          |       |          |       |          |        |        |       |       |          | _      |           |          |               |       |             |          |
|  |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       | •        |       |          |        |        |       |       |          |        |           |          |               |       |             |          |
|  |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             | -        |
|  |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             |          |
|  | <u> </u> |  |        |          |           |        |          |       |       |       | _             |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             |          |
|  |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             |          |
| •  |          |  |        |          |           |        |          |       |       |       |               |            |       |          |       |          |       |          |        |        |       |       |          |        |           |          |               |       |             |          |

| ·<br>[           |                  |                  |                  |                  |                    |                  |                  | <del></del> |               | •        | 11.0     |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |                  |               |
|------------------|------------------|------------------|------------------|------------------|--------------------|------------------|------------------|-------------|---------------|----------|----------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------|-------------|------------------|---------------|
|                  |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  | •                |             |             |                  |               |
|                  |                  |                  |                  |                  | _                  |                  |                  |             |               |          |          |                  | <u> </u>         |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |                  |               |
|                  |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  |                  |                  |                  |                   |                  | •                |                  |                  |                  |                  |                  |                  |                  |             |             |                  |               |
| _                |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             | ··          |                  |               |
| 1: 1,            | .:T              | 5: 1,            | Τ,               | ): 1,            | 5: 1,              | .;<br>;          | 2: 1,            | ). I,       | <b>‡</b> : 1, | 0: 1,    | 9: 1,    | 0: 1,            | 0: 1,            | : <b>1</b> ,     |                  | 3: 1,             | 4: 1,            | 1: 1,            | 4: 1,            | l: 1,            | 2: 1,            | 0: 1,            | i: 1,            | i. 1,            | ): 1,            | l: 1,       | 7: 1,       | <b>‡</b> : 1,    | <b>t</b> : 1, |
| S0001            | L0481            | S035(            | S0358            | H058(            | , S004             | S0132            | , H059           | 1, T0060: 1 | , S047        | , H0230: | , H0309: | , H005           | , H032           | S0051            | S6028            | , S000            | , H064           | H018             | , H067           | H059             | , H041           | , H056           | S0144            | S0426            | L080(            | L0521:      | L0767:      | L557             | , L0804:      |
| H0657: 1, S0001: | S0282: 1, L0481: | H0638: 1, S0356: | S0442: 1, S0358: | S0410: 1, H0580: | H0722: 1, S0045: 1 | 30046: 1, S0132: | 10549: 1, H0592: | H0574: 1,   | H0013: 1,     | H0581: 1 | H0251: 1 | 10596: 1, H0050: | 10242: 1, H0320: | Jole3: 1, S0051: | 70010: 1, S6028: | 10179: 1, \$0003: | 10039: 1, H0644: | .0142: 1, H0181: | H0617: 1, H0674: | S0036: 1, H0591: | H0616: 1, H0412: | H0202: 1, H0560: | S0438: 1, S0144: | 30422: 1, S0426: | .0772: 1, L0800: | .0773: 1, I | .0662: 1, I | .0766: 1, L5574: | .0522: 1      |
| 요                | 203              | <u> 운</u>        | <u>80</u>        | Š                | <u>H</u>           | <u>8</u>         | 贸                | 윤           | H             | H<br>H   | 윤        | 丑                | 呈                | <u>2</u>         | 2                | 呈                 | 丑                | <u> </u>         | 呈                | SO               | HO               | 丑                | SÓ               | SO               | 10               | <u> </u>    | <u> </u>    | <u> </u>         | <u> </u>      |
|                  |                  |                  |                  |                  |                    |                  | ٠                |             |               |          |          |                  |                  |                  |                  |                   |                  |                  | ٠                |                  |                  |                  |                  |                  |                  |             |             |                  |               |
|                  |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |                  |               |
|                  |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |                  |               |
| :                |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  | •                |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |                  |               |
|                  |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             | •           |                  |               |
|                  |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             | <del></del> |                  |               |
|                  |                  | •                |                  |                  |                    |                  |                  |             |               |          |          |                  |                  |                  |                  | -                 |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |                  |               |
|                  |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |                  |               |
|                  |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  | ,           |             |                  |               |
| -                |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  | •                |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |                  |               |
|                  |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |                  |               |
|                  |                  |                  |                  |                  |                    |                  |                  |             |               |          |          |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |                  |               |

| ·  |           |                                      |  |   |  |
|--|-----------|--------------------------------------|--|---|--|
|  |           |                                      |  |   | 256540,<br>600281,<br>600281   |
|  |           | ·                                    |  |   | 20q12-q13.1  |
| L0653: 1, L0776: 1,<br>L0782: 1, L0526: 1,<br>L0782: 1, L5622: 1,<br>L0788: 1, H0689: 1,<br>H0690: 1, H0682: 1,<br>H0658: 1, S0378: 1,<br>H0696: 1, H0134: 1,<br>S0404: 1, H0727: 1,<br>S0028: 1, L0742: 1,<br>L0752: 1, S0434: 1,<br>L0752: 1, S0434: 1,<br>L0589: 1, H0422: 1 and<br>S0458: 1. | H0615: 3  | H0615: 4                             | H0615: 2, S0278: 1,<br>S0002: 1, H0555: 1 and<br>S0026: 1. | L0758: 6, L0779: 4,<br>H0038: 3, H0616: 2,<br>L0593: 2, H0644: 1,<br>L0794: 1 and L0594: 1. | His-6 to Ser-11, H0031: 12, H0521: 11, 20q12-q13.1256540, Ser-122 to Asn-128, H0542: 11, L0745: 9, 600281, Leu-216 to Asp-221, H0266: 7, H0547: 7, Ser-323 to His-328. H0551: 6, H0013: 5, Sology 4, H0169: 4, H0494: 4, |
|  |           | Lys-1 to Lys-6,<br>Leu-10 to Asp-17, |  | Leu-14 to Ser-19.   | His-6 to Ser-11,  Ser-122 to Asn-128, H0542: 11, L0745: 3 Leu-216 to Asp-221, H0266: 7, H0547: 7 Ser-323 to His-328. H0551: 6, H0013: 5 S0152: 5, T0049: 4, H0494: 4   |
|  | 2572      | 2573                                 | 2574   | 2575  | 2576   |
|  | 411 - 548 | 138 - 221                            | 1 - 276  | 317 - 658   | 161 - 1291   |
|  | 397       | 398                                  | 399  | 400   | 401  |
|  | 1008379   | 1008396                              | 1008401  | 1008406   | 1008423  |
|  | HODEG86   | HODFA57                              | НОДЕВ31  | HTEMP79   | нореї29  |

|                     |                     |                     |                     |                     |                     |                     |                    | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                  |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     | -                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | _                   |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |
| .0748: 4, L0591: 4, | H0661: 3, H0251: 3, | H0046: 3, H0644: 3, | 10591: 3, S0002: 3, | H0520: 3, S0126: 3, | S0028: 3, L0439: 3, | .0754: 3, L0757: 3, | 0596: 3, H0423: 3, | HO171: 2, S0134: 2, | S0354: 2, S0358: 2, | H0580: 2, S0046: 2, | 10587: 2, H0497: 2, | 70039: 2, H0599: 2, | 10050: 2, L0471: 2, | .0010: 2, H0615: 2, | H0039: 2, H0090: 2, | H0038: 2, H0040: 2, | H0488: 2, T0042: 2, | S0150: 2, H0529: 2, | 49: 2, L0659: 2, | .0438: 2, H0519: 2, | 10660: 2, H0555: 2, | S3014: 2, S0027: 2, | .0777: 2, L.0593: 2, | .0601: 2, H0653: 2, | H0543: 2, H0170: 1, | H0556: 1, H0341: 1, | S0001: 1, H0664: 1, | H0662: 1, H0638: 1, | S0418: 1, S0420: 1, |
| 107                 | HOC                 | HOC                 | HOS                 | HO                  | <u>800</u>          | <u>1707</u>         | 507                | <u>H</u>            | 803                 | HO                  | H05                 | 00T                 | )OH                 | T00T                | )0H                 | )OH                 | H04                 | S01                 | 907              | 7                   | )<br>H              | 830                 | <u>101</u>           | <u>100</u>          | HO                  | HO                  | 00S                 | HOH                 | <u>S04</u>          |
|                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | 7                   |                     |                     |                     |                    | **                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                     | <del>.</del>        |                      |                     |                     | _                   |                     |                     |                     |
|                     |                     |                     | •                   |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                  |                     | -                   |                     |                      | •                   |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | <del></del> -       |                    |                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |                     |                  | <del></del>         |                     |                     |                      | ···-                |                     | •                   |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | -                   |                    |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                  |                     | ,                   |                     |                      |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | ·                   |                     |                     |                     | <del></del>        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |

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|---------------------|---------------------|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|----------------------|
|                     |                     |                     |                    |                     |                    |                     |                    |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     | ٠.                  |                     |                    |                      |
|                     |                     |                     |                    |                     |                    |                     |                    |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     | •                  |                     |                     |                     |                     |                     |                    |                      |
| S0356: 1, H0619: 1, | H0393: 1, S0278: 1, | H0431: 1, H0608: 1, | 0442: 1, H0586: 1, | .0643: 1, H0486: 1, | 0156: 1, H0575: 1, | H0036: 1, S0346: 1, | 0581: 1, H0052: 1, | 0263: 1, H0544: 1, | 10123: 1, H0011: 1, | H0014: 1, H0355: 1, | H0375: 1, H0188: 1, | 10687: 1, H0292: 1, | H0328: 1, H0428: 1, | 0622: 1, T0023: 1, | H0628: 1, H0383: 1, | [0165: 1, L0455: 1, | H0124: 1, H0135: 1, | 10268: 1, H0623: 1, | H0100: 1, H0429: 1, | 10561: 1, H0509: 1, | 10646: 1, H0538: 1, | 0800: 1, L0626: 1, | L0387: 1, L0654: 1, | (0701: 1, H0593: 1, | H0711: 1, H0690: 1, | H0435: 1, H0658: 1, | H0672: 1, L0602: 1, | 0206: 1, L0751: 1, | .0746: 1, L.0731: 1, |
| Š                   | H                   | <u>H</u>            | H                  | <b>H</b>            | <u> </u>           | <u> </u>            | <u> </u>           | <u> </u>           |                     | <u> </u>            | <u> </u>            | 正                   | 正                   | <u>=</u>           | <u> </u>            | <u> </u>            | <u> </u>            | <u> </u>            | 至                   | 프                   |                     | 브                  | <u> </u>            | 正                   | 工                   | <u> </u>            | 元<br>元              | S                  | _                    |
|                     | ,                   |                     |                    |                     |                    |                     |                    |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                      |
|                     |                     |                     |                    |                     |                    |                     |                    |                    |                     |                     | _                   |                     | _                   | -                  |                     |                     | _                   | _                   |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                      |
|                     |                     |                     |                    |                     |                    |                     |                    |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                      |
|                     |                     |                     |                    |                     |                    |                     |                    |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     | •                   |                     |                     |                    |                     |                     |                     |                     |                     | •                  | ٠                    |
|                     |                     |                     |                    |                     |                    |                     |                    |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                      |

|                     |                     |                     |                     |                        |           |                     |                        | 134570               |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | •                   |                     |                        |           |                  |                     |                   | :                   |           |
|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|------------------|---------------------|-------------------|---------------------|-----------|
|                     |                     |                     |                     |                        |           |                     |                        | 6p24                 |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                  |                     |                   | :                   |           |
| H0444: 1, H0445: 1. | S0434: 1, L0587: 1, | L0588: 1, L0581: 1, | L0604: 1, L0594: 1, | S0196: 1, H0506: 1 and | H0293: 1. | H0615: 2, H0090: 1, | S0002: 1 and H0478: 1. | L0754: 40, L0740: 8, | H0295: 2, H0663: 2, | H0169: 2, H0068: 2, | L0770: 2, L0662: 2, | L0789: 2, L0748: 2, | L0751: 2, L0755: 2, | L0589: 2, S0420: 1, | L0005: 1, H0586: 1, | H0156: 1, H0032: 1, | H0100: 1, H0494: 1, | L0803: 1, L0806: 1, | L0809: 1, H0660: 1, | H0672: 1, S0152: 1, | L0744: 1, L0779: 1, | L0777: 1, L0780: 1, | L0591: 1, L0593: 1 and | L0601: 1. |                  | AR089: 4, AR039: 3, |                   | AR052: 2, AR033: 2, | 2, AR104: |
|                     |                     |                     |                     | <u> </u>               |           | Pro-19 to Ser-29.   | <b>5</b> 2             | Lys-1 to Lys-23.     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Val-7 to Gly-14, | Lys-46 to Ala-52,   | Leu-82 to Phe-89, |                     | 08,       |
|                     |                     |                     |                     |                        |           | 2577                |                        | 2578                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                        |           | 2579             |                     |                   | :                   |           |
|                     |                     |                     |                     |                        |           | 2 - 94              |                        | 236 - 769            |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                        |           | 96 - 1268        |                     |                   |                     |           |
|                     |                     |                     |                     |                        |           | 405                 |                        | 403                  |                     |                     |                     | ,                   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 404              |                     |                   |                     | ٠         |
|                     |                     |                     |                     |                        |           | 1008429             |                        | 1008445              |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1008764          |                     |                   | :                   |           |
|                     |                     |                     |                     |                        |           | HODEF94             |                        | HPFCZ53              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HWACN71          |                     |                   |                     |           |

|   |                                      |   |   |                        |                     |                     |                   |  |                     |                     |                     |   |          |                   | -                     |                     |                     |             |                     |                     |                        |           | 301201,              | 301835,             | 311850              |                     |                     |                     |                     |
|---|--------------------------------------|---|---|------------------------|---------------------|---------------------|-------------------|--|---------------------|---------------------|---------------------|---|----------|-------------------|-----------------------|---------------------|---------------------|-------------|---------------------|---------------------|------------------------|-----------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   |                                      |   |   |                        |                     |                     |                   |  |                     |                     |                     |   |          |                   |                       | ţ                   |                     |             |                     |                     |                        |           | Xq22.1               | İ                   |                     |                     |                     | :                   |                     |
| Ala-123 to Gly-129, H0457: 2, H0494: 2, | HU/40: 1, HUS81: 1,                  | H0083: 1, L0//0: 1,                     | L0769: 1, L0764: 1,                     | L0791: 1 and H0727: 1. |                     |                     | AR039: 17, AR052: | Lys-154 to Asp-161, 11, AR104: 7, AR033: | 7, AR096: 7, AR053: | 6, AR089: 6, AR060: | 3, AR061: 3, AR055: | 3 | H0415: 2 | AR039: 15, AR089: | 10, AR053: 10, AR096: | 9, AR055: 8, AR060: | 7, AR033: 6, AR061: | 5, AR104: 4 | L0510: 3, L0504: 1, | L0502: 1, L0499: 1, | L0514: 1, L0512: 1 and | S3012: 1. | L0731: 10, L0759: 6, | L0782: 4, L0774: 3, | H0046: 2, H0620: 2, | L0598: 2, L0769: 2, | L0805: 2, L0663: 2, | S0380: 2, L0754: 2, | L0756: 2, H0170: 1, |
| Ala-123 to Gly-129,                     | Lys-154 to Gly-164, H0/40: 1, H0581: | Arg-2/4 to Glu-28/, H0083: 1, L0//0: 1, | Asp-294 to Thr-309, L0769: 1, L0764: 1, | Gln-324 to Ala-334,    | Pro-343 to Asn-359, | Lys-368 to Glu-385. | Ser-70 to Trp-88, | Lys-154 to Asp-161,                      | Tyr-265 to Lys-270. | •                   |                     |   |          | Pro-10 to Pro-16. | -                     |                     |                     |             |                     |                     |                        |           | Lys-5 to Phe-58.     |                     |                     |                     |                     | ,                   |                     |
|   |                                      |   |   |                        |                     |                     | 2580              |  |                     |                     |                     |   |          | 2581              |                       |                     |                     |             |                     |                     |                        |           | 2582                 |                     |                     |                     |                     |                     |                     |
|   |                                      |   |   |                        |                     |                     | 342 - 1151        |  |                     |                     |                     |   |          | 417 - 554         |                       |                     |                     |             |                     |                     |                        |           | 155 - 658            |                     |                     |                     |                     | •                   |                     |
|   |                                      |   |   |                        |                     |                     | 405               |  | _                   |                     |                     |   |          | 406               |                       |                     |                     |             |                     |                     |                        |           | 407                  |                     |                     |                     |                     |                     |                     |
|   |                                      |   |   |                        |                     | •                   | 1009017           |  |                     |                     |                     |   |          | 1009095           |                       |                     |                     |             |                     |                     |                        |           | 1009343              |                     |                     |                     |                     |                     | ,                   |
|   |                                      |   |   |                        |                     |                     | HOFMU69           |  | •                   |                     |                     |   |          | HSKNP59           |                       |                     |                     |             |                     |                     |                        |           | HETBR71              |                     |                     |                     |                     |                     |                     |

|                     |  |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |   |                     |                     |                     |                     |                     |                     |                        |           |                     |                     | -                   |                     |                     |                     | ;                   |                     |
|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | • | ,                   |                     |                     |                     |                     |                     |                        |           |                     | •                   |                     |                     |                     |                     |                     |                     |
| H0384: 1, H0484: 1, | 50360: 1, 50330: 1,<br>S0360: 1, S0410: 1, | H0580: 1, H0549: 1, | S0222: 1, H0427: 1, | H0156: 1, S0010: 1, | H0194: 1, H0545: 1, | H0375: 1, H0644: 1, | S0366: 1, H0038: 1, | S0210: 1, L0631: 1, | L0800: 1, L0764: 1, | L0662: 1, L0766: 1, | L0775: 1, L0375: 1, |   | L0647: 1, H0144: 1, | H0547: 1, H0660: 1, | H0672: 1, S0330: 1, | H0539: 1, S0152: 1, | S0044: 1, H0694: 1, | S0406: 1, L0779: 1, | L0758: 1, L0605: 1 and | H0653: 1. | L0663: 3, L0740: 3, | L0752: 3, L0758: 3, | L0759: 3, L0664: 2, | L0665: 2, L0439: 2, | L0756: 2, H0624: 1, | H0170: 1, H0685: 1, | S0003: 1, H0615: 1, | H0644: 1, H0616: 1, |
|                     |  | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                        |           | Glu-1 to Glu-13.    |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                        |           | 2583                | •                   |                     |                     |                     |                     | ,                   |                     |
|                     |  |                     | -                   |                     |                     |                     |                     |                     |                     |                     | •                   |   |                     |                     |                     |                     |                     |                     |                        |           | 3-914               |                     |                     |                     |                     | ,                   | :                   |                     |
|                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                        |           | 408                 |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     | •                   |                     |                        |           | 1009349             |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | • |                     |                     |                     |                     |                     |                     |                        |           | HE2ES17             |                     |                     |                     |                     |                     |                     |                     |

|   | _                                       |   |  |  |                                     | · · · · · · · · · · · · · · · · · · ·                                     |
|---|---|---|--|--|-------------------------------------|---|
|   |   |   |  |  |                                     | 109270,<br>109270,<br>109270,<br>109270,<br>113705,<br>113705,<br>144200, |
|   |   |   |  |  | 13q                                 | 17q21   |
| L0598: 1, L0649: 1,<br>L0666: 1, H0660: 1,<br>H0648: 1, H0672: 1,<br>H0696: 1, H0555: 1,<br>L0779: 1, L0755: 1,<br>L0592: 1 and S0192: 1. | S0045: 1                                | AR089: 1, AR033: 1,<br>AR060: 0, AR096: 0,<br>AR061: 0, AR055: 0,<br>AR039: 0<br>H0170: 1, H0574: 1,<br>H0052: 1, H0048: 1 and<br>L0766: 1. | H0305: 2, L0663: 2,<br>H0170: 1, S0003: 1,<br>L0803: 1 and H0651: 1. | H0624: 1                                 | H0208: 1, H0123: 1<br>and H0024: 1. | H0305: 1 and H0040:   |
|   | Asp-57 to Ala-62,<br>Gly-98 to Pro-112. | Gly-1 to Ser-6, Pro-20 to Ile-30.   |  | Pro-65 to Lys-70,<br>His-112 to Gly-131. | Arg-5 to Gly-11.                    | Gly-3 to Thr-9,<br>Arg-30 to Gly-39.                                      |
| ,   | 2584                                    | 2585  | 2586   | 2587                                     | 2588                                | 2589  |
|   | 14 - 349                                | 43 - 132  | 555 - 427  | 1 - 408                                  | 91 - 2                              | 1 - 357   |
|   | 409                                     | 410   | 411  | 412                                      | 413                                 | 414   |
|   | 1009362                                 | 1009365   | 1009388  | 1009398                                  | 1009403                             | 1009414   |
|   | негнм06                                 | HE2AG50   | HE2ES61  | HE2SO43                                  | HLHC107                             | HTTBR65   |

| 148065, | 148066, | 148066, | 148067, | 148067, | 148069, | 148080, | 154275, | 168610, | 171190, | 176705, | 185800, | 200350, | 221820, | 232200, | 249000, | 252920, | 253250, | 600119, | 600119, | 601363, | 601844 |   | 108725,          | 120700,           | 133171,           | 143890, | 147670, |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|---|------------------|-------------------|-------------------|---------|---------|
|         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |        |   | 19p13.2          |                   |                   |         |         |
|         |         |         |         |         |         |         |         | -       |         | -       |         |         |         |         |         |         |         |         |         |         | •      | H0328: 1, H0615: 1,<br>H0169: 1, L0807: 1 and | H0125: 1         |                   |                   |         |         |
|         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |        |   | Ala-9 to Glu-19, | Glu-40 to Asn-46, | Asp-55 to Ser-66. | •       |         |
|         |         |         |         |         |         |         |         |         |         |         |         | _       |         |         |         |         |         | ,       | •       |         |        | 2590  | 2591             |                   |                   |         |         |
|         | _       |         |         |         |         |         |         |         |         |         |         |         |         |         | _       |         |         |         |         |         |        | 434 - 586                                     | 169 - 423        |                   |                   |         |         |
|         | ,       |         |         |         |         |         | _       |         |         |         |         |         |         |         | ,       |         |         |         |         |         |        | 415   | 416              |                   |                   |         |         |
|         |         |         |         |         |         |         | -       |         |         |         |         |         |         |         |         |         |         |         |         | ٠.      |        | 1009453                                       | 1009479          |                   |                   |         |         |
|         |         |         | ,       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         | •       |         |        | HPFCV71                                       | HCABR46          |                   |                   |         |         |

| _       | _       |         |         |         |         |         |        |                     |                        |           |        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|--------|---------------------|------------------------|-----------|--------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------|---------|---------|---------|---------|---------|
| 147670. | 147670, | 151440, | 164953, | 231670, | 600276, | 600957, | 601843 | 188826,             | 250100,                | 250800,   | 250800 | 104770,             | 107300,             | 107670,             | 131210,             | 134638,             | 136132,             | 145001,             | 146740,             | 146740,             | 146740,             | 146790,             | 173610,                | 176310, | 186780, | 191030, | 227400, | 227400, | 601412, |
|         |         |         |         |         | •       |         |        | 22q13.2-            | q13.31                 | •         |        | 1q23                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |         |         |         |         |         |         |
|         |         |         |         |         |         |         |        | H0170: 1, H0327: 1, | H0038: 1, L0758: 1 and | S0276: 1. |        | L0769: 4, L0751: 4, | L0471: 2, H0024: 2, | L0768: 2, L0748: 2, | L0731: 2, L0595: 2, | H0685: 1, S0001: 1, | H0052: 1, H0050: 1, | H0012: 1, H0644: 1, | H0617: 1, H0040: 1, | H0100: 1, L0637: 1, | L0662: 1, L0809: 1, | L0665: 1, H0547: 1, | H0519: 1, L0780: 1 and |         | -       |         |         |         |         |
|         |         |         |         |         |         |         |        | Gln-34 to Ala-45,   |                        | -;        |        | Asn-12 to Tyr-19,   | Glu-33 to Glu-38,   | Arg-53 to Ser-62.   | )                   |                     |                     |                     |                     |                     |                     |                     |                        |         |         |         |         |         |         |
|         |         |         |         |         | ,       |         |        | 2592                | ,                      |           |        | 2593                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                      |         |         |         |         |         |         |
|         |         |         |         | ,       |         |         |        | 78 - 479            |                        |           |        | 1-648               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |         |         |         |         |         | _       |
|         |         |         |         |         |         |         |        | 417                 |                        |           |        | 418                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |         |         |         |         |         |         |
|         |         |         |         |         |         |         |        | 1009482             |                        |           | ,      | 1009833             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |         |         |         |         |         |         |
|         |         | -       |         |         | ,       |         |        | HCRCB80             |                        |           |        | HPMLW78             |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                        |         |         |         |         |         |         |

| Γ       |        | ·                 |                   |                 | 1                   |                  |           |                       |                     |                       |                       |                       |                      |                    |                  |                    |                    |                    |                     |                     |                     |                     |                     | _         |                  |                    |                    |          | _                  |
|---------|--------|-------------------|-------------------|-----------------|---------------------|------------------|-----------|-----------------------|---------------------|-----------------------|-----------------------|-----------------------|----------------------|--------------------|------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------|------------------|--------------------|--------------------|----------|--------------------|
| ٠.      |        |                   |                   |                 |                     |                  |           |                       |                     |                       | •                     |                       |                      |                    |                  |                    |                    |                    |                     |                     |                     |                     |                     |           |                  |                    |                    |          |                    |
| 601652, | 602491 |                   |                   |                 |                     |                  |           |                       |                     |                       |                       |                       |                      |                    |                  |                    |                    |                    |                     |                     |                     |                     |                     |           |                  |                    |                    |          |                    |
| 9       | 9      |                   |                   |                 | -                   |                  |           |                       | •                   |                       |                       |                       |                      |                    |                  |                    |                    |                    |                     |                     |                     |                     |                     |           |                  |                    | -                  |          |                    |
|         |        |                   |                   |                 |                     |                  |           |                       |                     |                       |                       |                       |                      |                    |                  |                    |                    |                    |                     |                     |                     |                     |                     |           |                  |                    |                    |          |                    |
| -       |        |                   |                   |                 | <br> <br>           |                  | _         | _                     |                     |                       | <u>:</u>              |                       |                      |                    |                  |                    |                    |                    |                     |                     |                     |                     |                     | •         |                  | -                  |                    |          |                    |
|         |        | -                 |                   |                 | 1 0504. 4           | 1 0510. 41       | 1 0600 41 | CC: 100001            | L0502: 29           | L0499: 20             | L0498: 13             | H0648: 13             | H0341: 9,            | .0505: 7,          | 10670: 7,        | 10659: 6,          | 0508: 5,           | 0114: 4,           | 0045: 4,            | .0515: 4,           | ,0664: 4,           | [0658: 4,           | 0028: 4,            | .0362: 4, | [0333: 3,        | 10090: 3,          | 30142: 3,          | 0374: 3, | .0750: 3,          |
|         |        | H0615: 2          | H0615: 1          | H0615: 1        | 1 0493 55 1 0504 46 | 0512.42 10510.41 | 0507.75   | ,050/: 39, LU509: 55, |                     |                       | .0503: 19, L0498: 13, | .0514: 13, H0648: 13, | .0506: 10, H0341: 9, | H0046: 7, L0505: 7 | .0497: 7, H0670: | .0520: 6, H0659: 6 | 30380: 6, L0508: 5 | 30027: 5, S0114: 4 | H0657: 4, S0045: 4, | H0100: 4, L0515: 4, | .0526: 4, L0664: 4, | S0126: 4, H0658: 4, | S0378: 4, S0028: 4, |           | 30026: 4, H0333: | H0318: 3, H0090: 3 | H0413: 3, S0142: 3 |          | H0689: 3, L0750: 3 |
|         |        | Ile-34.           | Gly-32.           | Gly-9,          | Lys-25.             | <u>_</u>         | _         |                       | Lys-168 to Ala-174, | Pro-178 to Ala-193, I |                       |                       |                      |                    | <u> </u>         | <u>, p-1</u>       | <u> </u>           |                    | #                   | <u> </u>            |                     | <u> </u>            | <u> </u>            |           | <u> </u>         | <u> </u>           | <u> </u>           |          | 1                  |
|         |        | Ala-26 to Ile-34. | Ser-27 to Gly-32. | Asp-1 to Gly-9, | Ala-76 to Lys-23.   | 7.14 110 to      | 1011-1101 | Ser-125 to            | Lys-168 t           | Pro-178 to            | Ala-196 t             |                       |                      |                    |                  |                    |                    |                    |                     |                     |                     |                     |                     |           |                  |                    |                    | -        |                    |
|         |        | 2594              | 2595              | .2596           | 2507                | 163              |           |                       |                     |                       |                       |                       |                      |                    |                  |                    |                    |                    |                     |                     |                     |                     |                     |           |                  |                    |                    |          |                    |
|         |        | 3 - 428           | 1 - 123           | 366 - 166       | 718 116             | 011 - 01/        |           |                       | ٠                   |                       |                       |                       |                      |                    |                  |                    |                    |                    |                     |                     |                     |                     |                     | •         |                  |                    |                    |          |                    |
|         |        | 419               | 420               | 421             | 422                 | 771              |           |                       |                     |                       |                       |                       |                      |                    |                  |                    |                    |                    |                     |                     |                     |                     |                     |           |                  |                    |                    |          |                    |
|         |        | 1009842           | 1009854           | 1009857         | 1000018             | 1002210          |           |                       |                     | -                     |                       |                       |                      |                    |                  |                    | ٠.                 |                    |                     |                     |                     |                     |                     |           |                  |                    |                    |          |                    |
|         |        | HODJK75           | HODJX27           | HODJV85         | HOOTO38             | 9000011          |           |                       |                     |                       |                       |                       |                      |                    |                  |                    |                    |                    |                     |                     |                     |                     |                     |           |                  |                    |                    |          |                    |

|                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                  | <u> </u>         |                  |                    |                    |                    |                  | -                |                    |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|------------------|------------------|------------------|--------------------|--------------------|--------------------|------------------|------------------|--------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                    |                    |                  |                  |                    |
|                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                    |                    |                  |                  |                    |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     | ·                   |                     |                     | <del></del>         |                     |                    |                  |                  |                  |                    |                    |                    |                  |                  |                    |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     | •                   |                     |                     |                     |                     |                    |                  |                  |                  |                    |                    |                    |                  | •                |                    |
|                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                    |                    |                  |                  |                    |
|                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     | •                   |                    |                     |                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                    |                    |                  |                  |                    |
| ຕົ                  | .,                  | 4                   | ų                   | બ્                  | 4                   | .,                  | .,                  | Ų                   | .,                  | .,                  | 4                   | 7,                 | 4                   | .;<br>2             | 2                   | 4                   | 4                   | 2,                  | .,                  | Τ,                 | : 1,             | Ť.               | . 1,             | <del>_</del>       | Ť                  | Ţ                  | . I,             | 1,               | 1,                 |
| 361:                | 0220                | 3305                | 358:                | 222:                | )622                | 0251                | 0188                | 364                 | 8                   | 0625                | 3422                | )521:              | )657:               | 0690                | 3390                | 742:                | )605:               | 3990                | 0543                | 0624               | 0171             | 0002             | 9890             | 940                | 0116               | 3255               | 0671             | 3354             | 0280               |
| 3, L                | 3, H                | 2, H(               | 2, S(               | 2, S0               | 2, L                | 2, H                | 2, H                | 2, H(               | 2, H                | 2, H                | 2, S(               | 2, L(              | 2,10                | 2, H                | 2, S(               | 2, LC               | 2, L(               | 2, H                | 2, H                | 2, H               | 1, H             | 1, T             | 1, H             | 1, S(              | 1, S(              | 1, H(              | 1, H             | 1, S(            | 1, H(              |
| H0445: 3, L0361: 3, | H0352: 3, H0220: 2, | 10049: 2, H0305: 2, | H0125: 2, S0358: 2, | S0046: 2, S0222: 2, | H0643: 2, L0622: 2, | H0013: 2, H0251: 2, | H0014: 2, H0188: 2, | S0003: 2, H0364: 2, | H0031: 2, H0040: 2, | 10087: 2, H0625: 2, | 10647: 2, S0422: 2, | 0501: 2, L0521: 2, | .0375: 2, L0657: 2, | 10365: 2, H0690: 2, | 10436: 2, S0390: 2, | S0037: 2, L0742: 2, | .0748: 2, L0605: 2, | .0603: 2, H0665: 2, | 10542: 2, H0543: 2, | .0718: 2, H0624: 1 | H0170: 1, H0171: | H0265: 1, T0002: | H0222: 1, H0686: | 10685: 1, S0040: 1 | H0381: 1, S0116: 1 | S0212: 1, H0255: 1 | H0669: 1, H0671: | H0638: 1, S0354: | S0360: 1, H0580: 1 |
| 呈                   | 윤                   | <u>6</u>            | 丑                   | <u>8</u>            | 丑                   | 丑                   | 呈                   | Š                   | 丑                   | 丑                   | 丑                   | <u> </u>           | ន                   | H                   | H                   | <u>S</u>            | <u> </u>            | <u> </u>            | 표                   | <u> </u>           | H                | H                | H<br>H           | ឣ                  | 出                  | 80                 | H                | H                | 8                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     | ٠                   |                    |                  |                  |                  |                    |                    |                    |                  |                  |                    |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                    |                    |                  |                  |                    |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                    |                    |                  |                  |                    |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                    |                    |                  |                  |                    |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                    |                    |                  |                  |                    |
|                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    | •                |                  |                  |                    |                    |                    |                  |                  |                    |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                    |                    |                  |                  |                    |

|                |                  |                  |            |                  |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                                       |                  | •                |                  |                  |                  |                  |                  |                  |                  |                  |                 |
|----------------|------------------|------------------|------------|------------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------|
|                |                  |                  |            |                  | ,              |                  |                  |                  |                  |                  |                  |                  | ··· = •          |                  |                  | <u>-</u>         | · · · · ·        |                                       | -                | • •              |                  |                  | -                | _                |                  |                  |                  |                  |                 |
| -              |                  | 2: 1,            | 2: 1,      | ): 1,            | 5: 1,          | . 1,             | 5: 1,            | 4: 1,            | ; 1,             | 5: 1,            | 7: 1,            | 7: 1,            | 4: 1,            | ): 1,            | 6: 1,            | 7: 1,            | 2: 1,            | 8: 1,                                 | 3: 1,            | 5: 1,            | 5: 1,            | 5: 1,            | 6: 1,            | 2: 1,            | 0: 1,            | 6: 1,            | ): 1,            | 2: 1,            | 2: 1,           |
| H0208-1 H0441- | H0392: 1, H0455: | H0438: 1, H0282: | <b>_</b> , | H0559: 1, L0623: | <del>_</del> i | 10039: 1, T0109: | H0069: 1, H0635: | H0575: 1, H0274: | S0346: 1, T0048: | H0581: 1, H0085: | H0263: 1, H0597: | H0231: 1, H0327: | H0172: 1, H0024: | S0051: 1, H0510: | H0594: 1, H0266: | H0271: 1, H0687: | S0214: 1, H0252: | H0688: 1, H0428:                      | T0006: 1, H0628: | H0606: 1, L0055: | H0383: 1, H0165: | H0166: 1, S0366: | H0591: 1, H0616: | H0063: 1, H0412: | H0059: 1, H0560: | H0359: 1, H0646: | .0598: 1, L0369: | .0764: 1, L0662: | .0388: 1, L0522 |
| UH             | OH               | HO               | HO         | OH               | OH<br>H        | ŎĹ.              | 田                | 0H               | <u> </u>         | OH HO            | HO<br>HO         | OH               | OH<br>H          | <u>S</u>         | OH<br>HO         | OH HO            | SO               | HO                                    | <u>2</u>         | HO<br>HO         | HO               | HO               | H<br>H           | H                | HO               | OH<br>H          | <u>9</u>         | <u>2</u>         | ro              |
|                |                  |                  |            |                  |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                                       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                 |
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|                |                  | · ·              |            |                  |                |                  |                  |                  |                  |                  |                  |                  |                  |                  | -                |                  |                  |                                       |                  |                  |                  |                  |                  |                  |                  |                  |                  | ····-            |                 |
|                | •                |                  | ,          |                  | •              |                  |                  |                  |                  | ,                |                  |                  |                  |                  |                  |                  | •                |                                       |                  |                  |                  |                  |                  | •                |                  |                  |                  |                  |                 |
| -              |                  |                  |            |                  |                | · .              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | , , , , , , , , , , , , , , , , , , , |                  |                  |                  |                  |                  |                  | •                |                  |                  |                  |                 |

|  | 102200,<br>106100,<br>131100,<br>131100,<br>131100,<br>147050,<br>153700,<br>161015,   |
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|  | 11q13  |
| L0775: 1, L0651: 1,<br>L0776: 1, L0659: 1,<br>L0517: 1, L0540: 1,<br>L0518: 1, L0783: 1,<br>L0548: 1, L0541: 1,<br>L0543: 1, L0367: 1,<br>L0563: 1, L0653: 1,<br>L0663: 1, L0665: 1,<br>H0684: 1, H0691: 1,<br>H0684: 1, H0691: 1,<br>H0684: 1, H0672: 1,<br>H0687: 1, L0772: 1,<br>L0771: 1, L0747: 1,<br>L0777: 1, L0747: 1,<br>L0777: 1, L0769: 1,<br>L0777: 1, L0769: 1,<br>L0590: 1, L0604: 1,<br>L0601: 1, H0667: 1 and<br>H0293: 1. | L0757: 22, L0601: 20,<br>L0747: 14, S0152: 13,<br>L0740: 13, H0617: 10,<br>L0748: 10, L0777: 9,<br>H0623: 7, S0126: 6,<br>S0212: 5, S0360: 5,<br>L0771: 5, L0744: 5,<br>L0759: 5, L0596: 5,<br>H0624: 4, H0549: 4, |
| <u> </u>   |  |
|  | 2598   |
|  | 1-1155   |
|  | 423  |
|  | 1009949  |
|  | HAOSI69  |

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| 164009,             | 168461,             | 168461,              | 168461,             | 180721,             | 180840,             | 191181,             | 193235,            | 209901,             | 232600,             | 259700,             | 259770,             | 600045,             | 600319,             | 600528,             | 601884              |                     |                     |                      |                     |                     | -                   | <del>.</del>        |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                      |                     |                     |                     |                     | :                  |                     |                     |                     |                     |                     | ·                   | •                   |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u> </u>            |                     |
| H0546: 4, S0250: 4, | H0135: 4, L0775: 4, | .0783: 4, L.0809: 4, | ,0663: 4, H0519: 4, | 10682: 4, L0439: 4, | .0749: 4, S0434: 4, | .0591: 4, S0358: 3, | 1376: 3, S0408: 3, | S0410: 3, S0045: 3, | H0550: 3, H0587: 3, | H0427: 3, H0599: 3, | H0052: 3, H0188: 3, | H0628: 3, H0606: 3, | H0551: 3, H0413: 3, | .0763: 3, L0641: 3, | .0773: 3, L0662: 3, | .0565: 3, H0547: 3, | H0435: 3, L0754: 3, | .0597: 3, L.0595: 3, | S0276: 3, H0686: 2, | H0717: 2, S0468: 2, | S0046: 2, H0619: 2, | H0592: 2, H0333: 2, | H0575: 2, H0545: 2, | HO050: 2, H0510: 2, | H0266: 2, H0412: 2, | H0056: 2, H0494: 2, | S0466: 2, S0440: 2, | .0769: 2, L0637: 2, | .0764: 2, L0768: 2, |
| )H                  | H                   | <u>고</u>             |                     | H                   | <u> </u>            | <u> </u>            | S                  | Š                   | <u>H</u>            | H                   | <u> </u>            | <u> </u>            | 耳                   | <u> </u>            | <u>1</u>            | <del>1</del>        | <u> </u>            | <u>, j</u>           | S                   | <u>. E.</u>         | S                   |                     | <u>ic</u>           | <u>選</u>            | <u> </u>            | <u>. iii</u>        | S                   | <u></u>             |                     |
|                     |                     |                      |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
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|                     |                     |                      |                     |                     |                     |                     | <del></del>        | <u> </u>            |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     | •                   | <del>,,,,,,</del>   |                     |
|                     |                     |                      | _                   |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |

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|                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |        |                  |             |             |           |           |                  |             |                  |   |
|                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    | · _              |                  |                  |                  |                  |                  |                  |                  |                  |        |                  |             | _           |           |           |                  |             |                  |   |
|                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |        |                  |             |             |           |           |                  |             |                  |   |
|                     |                     |                     | <del></del> -       |                     |                     |                    |                  |                  |                  |                    |                  | · ·              |                  |                  |                  |                  |                  |                  |                  |        |                  |             |             | _         |           |                  |             | _                | •   |
| 06: 2,              | 64: 2,              | 58: 2,              | 02: 2,              | 28: 2,              | 99: 2,              | 777: 2,            | 585: 1,          | 295: 1,          | 561: 1,          | 450: 1,            | 56: 1,           | 208: 1,          | 545: 1,          | 22: 1,           | 586: 1,          | 039: 1,          | 013: 1,          | 251: 1           | 204: 1           | 041:1  | 199: 1           | L0163: 1,   | , S0051: 1, | 355: 1    | 252: 1,   | 194: 1           | L0055: 1,   | 036: 1           | )268: 1                                       |
| 2, L08              | 2, L06              | 2, H06              | 2, 1.06             | 2, S00              | 2, L05              | 2, H06             | 1, HO            | 1, HO            | 1, HO            | 1, HO              | 1, S03           | 1, H0            | 1, H00           | 1, S02           | H0298: 1, H0586: | HO486: 1, T0039: | 70040: 1, H0013: | H0196: 1, H0251: | H0205: 1, H0204: | H0041: | H0123: 1, H0199: | : 1, LO     | _           | 1, H0355: | 1, H0252: | H0688: 1, L0194: | 1, 10       | H0598: 1, S0036: | H0488: 1, H0268:                              |
| .0766: 2, L0806: 2, | .0805: 2, L0664: 2, | S0374: 2, H0658: 2, | H0539: 2, L0602: 2, | 53014: 2, S0028: 2, | .0779: 2, L0599: 2, | S0194: 2, H0677: 2 | H0171: 1, H0685: | H0716: 1, H0295: | H0294: 1, H0661: | H0662: 1, H0450: 1 | S0418: 1, S0356: | S0354: 1, H0208: | S0476: 1, H0645: | S6022: 1, S0222: | 10298            | H0486            | [0040:           | H0196            | H0205            | H0596  | H0123            | H0024: 1, ] | H0051:      | T0010: 1  | S0022:    | H0688            | L0483: 1, ] | H0598            | H0488   |
| <u></u>             | <u>1 </u>           | S                   | <u> </u>            | Ŋ                   | <u></u>             | <u>0</u>           | <u>, 11</u>      | <u> </u>         | <u> </u>         | <u> </u>           | <u> </u>         |                  | <u>, (, )</u>    | <u> </u>         |                  |                  |                  |                  |                  |        |                  |             |             |           |           |                  |             |                  |   |
|                     |                     | •                   |                     |                     |                     |                    |                  |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |        |                  |             |             |           |           |                  |             |                  |   |
|                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  | •                |                  |        |                  |             |             |           |           |                  |             |                  |   |
| -                   |                     |                     |                     |                     |                     |                    |                  | ,,,-             |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |        |                  |             |             | _         |           |                  |             |                  |   |
| _                   |                     | -                   |                     |                     |                     |                    |                  |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |        |                  |             |             |           |           |                  |             | <del></del>      |   |
|                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |        |                  |             |             |           |           |                  |             |                  |   |
| igg                 |                     |                     |                     |                     | _                   |                    |                  |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |        |                  |             |             |           |           |                  |             |                  |   |
| L                   | <u></u>             |                     | _                   |                     |                     |                    |                  |                  |                  |                    |                  |                  |                  | _                |                  |                  |                  |                  |                  |        |                  | _           |             |           |           |                  |             |                  | <u>,                                     </u> |
|                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                  |                  | ·                |                  |                  |                  |                  |                  |                  |        |                  |             |             |           |           |                  |             |                  |   |
|                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  | _      |                  |             |             |           |           |                  |             |                  |   |
|                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                  |                  |                  |                  |                  | _                |                  |                  |                  |        |                  |             |             |           |           |                  |             |                  |   |
|                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |        |                  |             |             |           |           |                  |             |                  |   |
|                     |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  | _                | _      |                  |             | _           |           |           |                  |             |                  |   |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     | _                   |                     | <del></del>         |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     | -                   |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |
| H0059: 1, L0564: 1, | S0438: 1, H0633: 1, | H0646: 1, S0208: 1, | 50210: 1, S0002: 1, | H0529: 1, L0369: 1, | .5566: 1, L0372: 1, | .0642: 1, L0767: 1, | .0522: 1, L0774: 1, | .0655: 1, L0629: 1, | 20656: 1, L0634: 1, | .0659: 1, L0542: 1, | .0792: 1, L0532: 1, | L0666: 1, H0144: 1, | H0693: 1, H0593: 1, | H0689: 1, H0683: 1, | H0660: 1, H0672: 1, | S0330: 1, H0696: 1, | S0406: 1, S0037: 1, | L0743: 1, L0751: 1, | L0750: 1, L0756: 1, | L0780: 1, L0752: 1, | L0755: 1, S0031: 1, | H0445: 1, H0343: 1, | L0589: 1, H0665: 1, | S0192: 1, S0424: 1, | S0460: 1 and S0456: 1. | H0658: 4, H0551: 3, | L0439: 3, H0686: 2, | H0441: 2, H0013: 2, | S0152: 2, L0744: 2, |
|                     | S                   | <u>;14</u>          | S                   | <u>;-1-1</u>        |                     |                     | <b>.</b>            |                     |                     |                     | H                   |                     |                     | Ē                   |                     | <u> </u>            | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                        | Ala-7 to Arg-18,    | Pro-37 to Asp-43.   | Š,                  | $\neg$              |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2599                |                     | ,                   |                     |
|                     |                     |                     | •                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     | -                   | •                   |                     |                     |                     |                     |                     |                     |                        | 3 - 692             |                     |                     |                     |
| -                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 424                 | <br>!               |                     |                     |
|                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1010157             |                     |                     |                     |
|                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                        | HSDIV67             | io tractit          |                     |                     |

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|---|------------------|---------------------|------------------|-----------|------------------|-----------|------------------|-----------------|------------------|------------------------|-----------|---------------------|---------------------|----------------------|-------------------|------------------|---|---------------------|------------------|---------------------|---------------------|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|
|   |                  |                     |                  |           |                  |           |                  |                 |                  |                        |           |                     |                     |                      |                   |                  |   |                     |                  |                     |                     |                     |                    |                     |                    |                     |                    |
|   |                  |                     |                  |           |                  |           |                  |                 |                  |                        |           |                     |                     |                      |                   |                  |   |                     |                  |                     |                     |                     | _                  |                     |                    |                     | _                  |
|   |                  |                     |                  |           |                  |           |                  |                 |                  |                        |           |                     |                     |                      |                   |                  |   |                     |                  |                     |                     |                     |                    |                     |                    |                     |                    |
|   |                  |                     |                  |           |                  |           |                  |                 |                  |                        |           |                     |                     |                      |                   |                  |   |                     |                  |                     |                     |                     |                    |                     |                    |                     |                    |
| 2,<br>1,  | -1-              | · <del>- 1</del>    | : 1,             | 1,        | 1,               | 1,        | 1,               | Ι,              | . 1,             | 1 and                  |           | 3: 6,               | : 5,                | .4                   | <u>ښ</u>          | .;<br>3,         | .3,   | : 3,                | : 2,             | . 2,                | <br>2,              | : 2,                | 7: 2,              | 6: 2,               | : 2,               | 1: 1,               | 1: 1,              |
| S0260:<br>S0045:  | H0009<br>H0012   | T0003               | H0428            | L0763:    | L0769            | L0646:    | 1.0775           | S0028           | L0592            | S0412                  |           | , L080              | L0809               | L0756                | S0360             | L0527            | H0689   | L0731               | S0222            | H0163               | L0804               | 1.0518              | H054               | , H069              | L0485              | , H017              | , H038             |
| 7759: 2,<br>360: 1,   | L0394: 1, H0009: | H0620: 1, T0003:    | H0188: 1, H0428: | .0564: 1, | .0770: 1, L0769: | .0637: 1, | .0643: 1, L0775: | 0805: 1, S0028: | .0779: 1, L0592: | S0276: 1, S0412: 1 and | H0506: 1. | L0758: 8, L0803: 6, | .0740: 6, L0809: 5, | .0794: 4, L.0756: 4, | 0752: 4, S0360: 3 | H0551: 3, L0527: | .0783: 3, H0689:                              | .0777: 3, L0731: 3, | F0049: 2, S0222: | S0049: 2, H0163: 2, | .0766: 2, L0804: 2, | .0659: 2, L.0518: 2 | .0438: 2, H0547: 2 | H0521: 2, H0696: 2, | .0779: 2, L0485: 2 | H0170: 1, H0171: 1, | H0656: 1, H0381: 1 |
| 68, L(<br>189,S(  | <u> </u>         |                     | _                |           | 그                | <u> </u>  | 7                | ·               | <u> </u>         | Š                      | 프         | -                   | <u></u>             | ᆜ                    | ᆋ                 | <u> </u>         | <u>, , , , , , , , , , , , , , , , , , , </u> | 卢                   | F                | S                   | <u>.</u>            | 브                   |                    | _#                  |                    | <u>, 11, 1</u>      |                    |
| Asn-1<br>o Asp-   | o Asn-           | o Val-              |                  |           |                  |           |                  |                 |                  |                        |           | Thr-2               | Gln-9               |                      |                   |                  |   |                     |                  |                     |                     |                     |                    |                     |                    |                     |                    |
| Ile-162 to Asn-168, L0759: 2, S0260: 2, Arg-179 to Asp-189, S0360: 1, S0045: 1, | Asp-206 to Asn-  | Glu-222 to Val-230. |                  |           |                  |           |                  |                 |                  |                        |           | Ser-18 to Thr-23,   | Val-91 to Gln-99.   |                      |                   |                  |   |                     |                  |                     |                     |                     |                    |                     |                    | •                   |                    |
|   | ~ c              | 1                   | ,                | _         |                  |           |                  | <del></del>     | -                |                        |           | 2600                | _                   |                      |                   |                  |   |                     |                  |                     |                     |                     |                    |                     |                    |                     |                    |
|   |                  |                     |                  |           |                  |           |                  |                 |                  |                        |           | 2-337               |                     |                      |                   |                  | _   |                     |                  |                     |                     |                     |                    |                     |                    |                     | •                  |
|   |                  |                     |                  |           |                  |           |                  |                 |                  |                        |           | 425                 |                     | <u> </u>             |                   |                  | •   |                     |                  |                     |                     |                     |                    |                     |                    |                     |                    |
|   |                  |                     |                  |           |                  |           |                  |                 |                  |                        |           | 1010299             |                     |                      |                   |                  |   | ٠.                  |                  |                     |                     | •                   |                    |                     |                    |                     |                    |
|   |                  |                     |                  |           |                  |           |                  |                 | -                |                        |           | HSDZM65             | 200                 |                      |                   |                  |   |                     |                  |                     | _                   |                     |                    |                     |                    |                     |                    |

|           |         |                    |                  |                  |                  | —                |                  |             |                  |             |           |                  |           |           |           |           |           |           |           |           |             |                  |                  |                  |                  |                  |                  |                  |                  |
|-----------|---------|--------------------|------------------|------------------|------------------|------------------|------------------|-------------|------------------|-------------|-----------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|           |         |                    |                  |                  |                  |                  |                  |             |                  |             |           |                  |           |           |           |           |           |           |           |           |             |                  |                  |                  |                  |                  |                  |                  |                  |
|           |         | _                  |                  | _                |                  |                  | . <u> </u>       |             |                  |             |           |                  |           |           | · ·       |           |           |           |           |           |             |                  | <del></del>      |                  |                  | _                | _                |                  | _                |
|           |         |                    |                  |                  |                  | •                |                  |             |                  |             |           |                  |           |           | ٠.        |           |           |           |           |           |             |                  |                  |                  |                  |                  |                  |                  |                  |
|           |         |                    | ·                | _                |                  |                  |                  | _           |                  |             |           |                  |           |           |           |           | <u> </u>  |           |           |           |             | _                |                  |                  |                  |                  |                  |                  | 7                |
| 62: 1,    | 376: 1, | 45: 1,             | 331: 1,          | 013: 1,          | 004: 1,          | 545: 1,          | 471: 1,          | , S0051: 1, | 336: 1,          | , H0553: 1, | L0060: 1, | 494: 1,          | H0561: 1, | L0637: 1, | L0800: 1, | L0375: 1, | L0653: 1, | L0655: 1, | L0790: 1, | L0665: 1, | , S0374: 1, | 7711:1           | )660: 1          | 380: 1,          | 743: 1           | 260: 1,          | 601: 1,          | 667: 1           | 276: 1,          |
| 1, H0662: | 1, S03  | S0007: 1, S0045: 1 | H0455: 1, H0331: | H0574: 1, H0013: | H0042: 1, H0004: | 10421: 1, H0545: | H0041: 1, L0471: | : 1, S00    | H0083: 1, S0336: | : 1, H0     |           | H0487: 1, H0494: |           |           | 1,10      | -         | 1,        | •         | : 1, LO   | •         |             | HO519: 1, H0711: | H0659: 1, H0660: | H0672: 1, S0380: | H0627: 1, L0743: | .0755: 1, S0260: | .0608: 1, L0601: | .0366: 1, H0667: | S0242: 1, S0276: |
| S0212: 1  | H0638   | S0007:             | H0455            | H0574            | H0042            | H0421            | H0041            | H0014       | H0083            | H0428:      | H0040: 1  | H0487            | H0560: 1  | H0529: 1, | 1.0667:   | 1.0662:   | L0805: 1  | L0776: 1  | L0787: 1, | L0666: 1  | \$0053: 1   | H0515            | H0659            | H067             | H062             | 1.0755           | 1000             | 170366           | S0242            |
|           |         |                    |                  |                  |                  |                  |                  |             |                  |             |           |                  |           |           |           |           |           |           |           |           |             |                  |                  |                  |                  |                  |                  |                  | ٠                |
|           |         |                    |                  | •                |                  |                  |                  |             |                  |             |           |                  |           |           |           |           |           |           |           |           |             |                  |                  |                  |                  |                  |                  |                  |                  |
|           |         |                    |                  |                  |                  |                  |                  |             |                  |             | •         |                  |           |           |           |           |           |           |           |           |             |                  |                  |                  |                  |                  |                  |                  |                  |
|           |         |                    |                  |                  |                  |                  |                  |             |                  |             |           |                  |           |           |           |           |           |           |           | •         |             |                  |                  |                  | -                |                  |                  |                  |                  |
| -         |         |                    |                  |                  |                  |                  |                  |             |                  |             | -         |                  |           |           |           | <u> </u>  |           |           |           |           |             |                  | _                |                  |                  |                  |                  |                  |                  |
|           |         |                    |                  |                  |                  |                  |                  |             |                  |             |           |                  |           |           |           |           |           |           |           |           |             |                  |                  |                  |                  |                  |                  |                  |                  |
|           |         |                    |                  |                  |                  |                  | -                |             |                  |             |           |                  |           |           |           | _         |           |           |           |           | •           |                  |                  |                  |                  |                  |                  | -                |                  |
|           |         |                    | -                |                  |                  |                  |                  |             |                  |             |           |                  |           | •         |           |           |           |           |           |           |             |                  |                  |                  |                  | ,                |                  |                  |                  |
|           |         |                    |                  |                  |                  |                  |                  | •           |                  |             |           |                  |           |           |           |           | ٠         | •         |           |           |             |                  |                  |                  |                  |                  |                  |                  | •                |
|           | _       |                    |                  |                  |                  |                  |                  |             |                  |             |           |                  |           |           |           |           |           |           |           |           | _           |                  |                  |                  |                  |                  |                  |                  |                  |
|           |         |                    |                  |                  |                  |                  |                  |             |                  |             |           | •                |           |           |           | ٠.        |           |           |           |           |             |                  |                  |                  |                  |                  |                  |                  |                  |
| L         |         |                    |                  |                  |                  |                  |                  |             |                  |             |           |                  |           |           |           |           |           |           |           |           |             |                  | _                |                  |                  |                  | -                |                  |                  |

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|------------------------|---------------------|---------------------|---------------------|----------------------|----------------------|--------------------|---------------------|---------------------|----------------------|---------------------|----------------------|---------------------|---------------------|---------------------|--------------------|------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|----------------------|--------------------|--------------------|--------------------|---------------------|--------------------|
|                        |                     |                     |                     |                      |                      |                    |                     |                     |                      |                     |                      |                     |                     |                     |                    |                  |                     |                     |                     |                     |                    |                    |                     |                      |                    |                    |                    |                     | ļ                  |
|                        |                     |                     |                     |                      |                      |                    |                     |                     |                      | _                   |                      |                     |                     |                     |                    |                  |                     |                     |                     |                     |                    |                    |                     |                      |                    |                    |                    |                     |                    |
|                        |                     |                     |                     | ٠                    |                      |                    |                     |                     |                      |                     |                      |                     |                     |                     | •                  |                  |                     |                     |                     | ,                   |                    |                    |                     |                      |                    |                    |                    |                     |                    |
|                        |                     |                     |                     |                      |                      |                    |                     |                     |                      |                     |                      |                     |                     |                     | ·                  |                  |                     |                     |                     |                     |                    |                    |                     |                      |                    |                    |                    |                     | 4                  |
| 506: 1.                | 3: 7,               | .5,                 | ਸ਼ <b>ੰ</b>         | 4,                   | 4,                   | .3,                | .3,                 | .3,                 | 3,                   | : 3,                | : 2,                 | . 2,                | 2,                  | 2,                  | F. 2,              | 2, 2,            | 5. 2,               | : 2,                | . 2,                | : 2,                | . 2,               | t: 2,              | 2.2                 | 2,                   | .2                 | 2, 2,              | 5: 1,              | l: 1 <b>,</b>       | 9: 1,              |
| and HO                 | , \$0358            | H0561               | S0418:              | L0748                | 1.0362               | H0591              | L0740               | L0752               | L0758                | 10595               | H0656                | S0356               | S0444               | S0278               | H0574              | H0052            | , H026              | H0090               | , T0042             | ,10768              | T0659              | H014               | , H052              | 1.0596               | L0601              | , S0242            | , ноге             | , \$000             | , но58             |
| S0446: 1 and H0506: 1. | S0360: 8, S0358: 7, | H0547: 6, H0561: 5, | S0126: 5, S0418: 4, | .0766: 4, L.0748: 4, | .0755: 4, L.0362: 4, | H0686: 3, H0591: 3 | 10521: 3, L0740: 3, | .0777: 3, L0752: 3, | .0731: 3, L.0758: 3, | H0445: 3, L0595: 3, | \$0196: 3, H0656: 2, | H0663: 2, S0356: 2, | S0376: 2, S0444: 2, | S0046: 2, S0278: 2, | H0331: 2, H0574: 2 | H0581: 2, H0052: | H0046: 2, H0266: 2, | S0003: 2, H0090: 2, | H0623: 2, T0042: 2, | H0494: 2, L0768: 2, | 0803: 2, L0659: 2, | 0809: 2, H0144: 2, | H0520: 2, H0522: 2, | .0439: 2, L.0596: 2, | 0591: 2, L0601: 2, | H0136: 2, S0242: 2 | H0423: 2, H0265: 1 | H0341: 1, S0001: 1, | H0305: 1, H0589: 1 |
| SO                     |                     |                     | S                   | <u> </u>             | <u> </u>             | 臣                  | H                   | 2                   | <u>김</u>             | Ĭ                   | 8                    | 田                   | S                   | <u>S</u>            | Ħ                  | Ħ                | 苴                   | <u>8</u>            | Ĭ                   | Ĭ                   | <u> </u>           | <u> </u>           | 互                   | <u> </u>             | <u> </u>           | 正                  | Ξ                  | 田                   | 픠                  |
|                        | al-25,              | His-105 to Lys-125, | Tyr-147 to Ser-155. |                      |                      |                    |                     |                     |                      |                     |                      |                     |                     |                     |                    |                  |                     |                     |                     |                     |                    |                    |                     |                      |                    |                    |                    |                     |                    |
|                        | Ser-16 to Val-25    | 105 to ]            | 147 to              |                      |                      |                    |                     |                     |                      |                     |                      |                     |                     |                     |                    |                  |                     |                     |                     |                     |                    |                    |                     |                      | •                  |                    |                    |                     |                    |
|                        | Ser-                | His-                | Tyr-                |                      |                      |                    |                     |                     |                      |                     |                      |                     |                     |                     |                    |                  |                     |                     |                     |                     |                    |                    |                     |                      |                    |                    |                    | ٠.                  |                    |
|                        | 2601                |                     | •                   |                      |                      |                    |                     |                     |                      |                     |                      |                     |                     | •                   |                    |                  |                     |                     |                     |                     |                    |                    |                     |                      | _                  |                    |                    |                     |                    |
|                        | 144 - 608           |                     | -                   |                      | •                    | -,-                |                     |                     |                      |                     |                      |                     |                     |                     |                    |                  |                     |                     |                     |                     |                    |                    |                     |                      |                    |                    |                    | ٠                   | ,                  |
|                        | 4                   |                     |                     |                      |                      |                    |                     |                     |                      |                     |                      |                     |                     |                     |                    |                  |                     |                     |                     |                     | _                  |                    |                     |                      |                    |                    |                    |                     |                    |
|                        | 426                 |                     |                     |                      |                      |                    |                     |                     |                      |                     |                      |                     |                     |                     |                    |                  |                     |                     |                     |                     |                    |                    |                     |                      |                    |                    |                    |                     |                    |
|                        | 8                   |                     |                     |                      |                      |                    | •                   |                     |                      |                     |                      | _                   |                     |                     | -                  |                  |                     |                     |                     |                     |                    |                    |                     |                      |                    | •                  |                    |                     |                    |
|                        | 1010400             |                     |                     |                      |                      |                    |                     |                     |                      |                     |                      |                     |                     |                     |                    |                  |                     |                     | ,                   |                     |                    |                    |                     |                      |                    |                    |                    |                     |                    |
|                        | HPDOC39             |                     |                     |                      |                      |                    |                     |                     |                      |                     |                      |                     |                     |                     |                    | -                |                     |                     |                     |                     |                    |                    |                     |                      |                    |                    |                    |                     |                    |
|                        | HPD                 |                     |                     |                      |                      |                    |                     |                     |                      |                     |                      |                     |                     |                     |                    |                  |                     |                     |                     |                     |                    |                    |                     |                      |                    |                    |                    |                     |                    |

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|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 | _         |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  | •                |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
| <del></del> :                        |                  |          |                  |                  |           |                  |                  |                  | <u> </u>     |          | _                |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  | •        | <u>,</u>         | ŗ                |           | l,               | 1,               | 1,               | <del>_</del> |          | 1,               | Ŧ,       | ī,       | 1,               | 1,               | •                | _÷        | Ţ,       | _        | <b>-</b> , | 1,              | 1,        | 1,       | 1,               | 1,               | Ļ,               | Į,               | <del>_</del>     |
| 86:<br>19:1                          | 22: 1            | 13: 1    | 53: 1            | 21: 1            | 4:1       | <u>71</u>        | 73:              | 39.              | 31:          | 66: 1    | 38:              | 112:     | 14       | 360:             | 533:             | 02: 1            | L.0769: 1 | L0374: 1 |          | .0774:     |                 | 10664:    | 374:     | 689:             | 659:             | H0658: 1, H0539: | 32:              | 134:             |
| S0420: 1, H0580:<br>S0045: 1, H0619: | H0437: 1, S0222: | , H0013: | H0599: 1, H0253: | S0010: 1, H0421: | l, H0544: | H0546: 1, H0041: | H0050: 1, H0373: | H0083: 1, H0039: | , H0031:     | , S0366: | H0135: 1, H0038: | , H0412: | , T0041: | 10334: 1, H0560: | H0509: 1, H0633: | S0142: 1, S0002: | 5         | L03      | 2        | 1507       | 0775: 1, L0666: | 1,106     | , S0374: | H0519: 1, H0689: | H0682: 1, H0659: | , H0             | S0152: 1, S0332: | H0696: 1, H0134: |
| <br>                                 | 7: 1,            | 9: 1,    | 9: 1,            | ): 1 <b>,</b>    | 8: 1,     | 6: 1,            | 0: 1,            | 3: 1,            | _            | _        | 5: 1,            | 1: 1,    | 6: 1,    | 4: 1,            | 9: 1             | 2: 1,            | 0:1,      | 6:1,     | 0764: 1, | 1: 1,      | 5: 1;           | .0663: 1, |          | 19:1             | 32: 1            | 58: 1            | 2: 1             | 96: 1            |
| S0420: 1<br>S0045: 1                 | 1043             | 70039: 1 | <b>1059</b>      | 000              | .0738: 1  | 1054             | 1005             | 400F             | H0622:       | 10673:   | <b>HO13</b>      | H0551:   | H0056: 1 | H033             | H050             | <b>S014</b>      | L0770: 1  | L0646: 1 | 1076     | L0381: 1   | 1,001           | 1000      | H0701: 1 | H05              | H068             | H06              | S015             | 90H              |
| S S                                  | <u> </u>         |          | <u> </u>         | <u>(7)</u>       | <u> </u>  |                  | <u> </u>         | <u>, 111</u>     | <u>, 114</u> |          | _=               |          |          |                  |                  |                  |           |          |          |            | <u></u>         |           |          |                  |                  |                  | ,                |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           | •        |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  | -         |                  |                  |                  |              | _        |                  |          |          |                  |                  | _                |           |          |          |            |                 |           |          |                  | •                |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  | _        |          |                  |                  |                  |           |          |          |            |                 | _         |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          | •        |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  | •                |           |                  |                  |                  |              |          |                  |          |          | ٠.               |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  | ,                |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  | _        |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
|                                      |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          |            |                 |           |          |                  |                  |                  |                  |                  |
| L                                    |                  |          |                  |                  |           |                  |                  |                  |              |          |                  |          |          |                  |                  |                  |           |          |          | _          |                 |           |          |                  |                  |                  |                  |                  |

|                     |                     |                     |                     |                        |  |                       |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | $\neg$              |
|---------------------|---------------------|---------------------|---------------------|------------------------|--|-----------------------|----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                        | 144120,<br>147020,                       | 147110                |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | -                   |                     |                     |                        | 14q32.33 1                               |                       |    |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| S0406: 1, L0754: 1, | 10786: 1, L0759: 1, | S0260: 1, S0026: 1, | H0542: 1, H0543: 1, | H0422: 1 and S0452: 1. | AR104: 72, AR060:<br>48 AR089: 29 AR055: | 25, AR096: 16, AR061: | 10 | L0755: 9, L0757: 8, | L0519: 6, L0748: 6, | L0763: 5, L0774: 5, | L0779: 5, H0657: 4, | S0222: 4, L0471: 4, | L0766: 4, H0670: 4, | L0588: 4, S0408: 3, | S0438: 3, L0520: 3, | L0769: 3, S0374: 3, | H0352: 3, H0686: 2, | H0341: 2, S0444: 2, | S0360: 2, S0046: 2, | H0261: 2, H0333: 2, | L0622: 2, H0494: 2, | S0422: 2, L0767: 2, | L0768: 2, L0775: 2, | L0809: 2, H0659: 2, | S0328: 2, H0696: 2, | S0406: 2, L0747: 2, | L0750: 2, L0731: 2, |
|                     |                     |                     |                     |                        | Gly-1 to Asp-8,                          |                       |    |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
|                     |                     |                     |                     |                        | 2602                                     |                       |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        | 3 - 236                                  |                       |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        | 427                                      |                       |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        | 1010525                                  |                       |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        | HE2PS15                                  |                       |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|-------------------|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------|-------------|-----------|-----------|----------|
|                   |              |                  |                  | ٠                |                  |                  |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | •           |             |           |           |          |
|                   |              |                  |                  |                  |                  |                  |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |           |           |          |
|                   |              |                  |                  | ,                |                  |                  |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |           |           |          |
|                   | ٠            |                  |                  |                  |                  |                  |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |           |           |          |
| ┞                 |              |                  |                  |                  |                  | -                |                  |                  | _ <del></del> |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | _                |                  | _                |                  |                  | _                |             |             | _         |           | ,        |
| 40.0              | , r<br>; ;   | 14: 1,           | 16: 1,           | 10: 1,           | 07: 1,           | 70: 1,           | 138: 1,          | 186: 1,          | 09: 1,        | 98: 1            | 04:1             | 18: 1,           | 52: 1,           | 572: 1,          | 382: 1           | 148: 1,          | 83: 1,           | 587: 1           | 031:1            | 364: 1,          | 36: 1,           | 413: 1           | 131: 1           | 70: 1,           | 372: 1,          | .0764: 1    | L0806: 1    | L0512: 1  | L0540: 1  | L0526: 1 |
| THUS              | , mo         | 1, 801           | 1, S01           | , S04            | 1, S00           | l, H03           | 1, H02           | 1, H04           | 1, T0109:     | 1, H00           | 1, H0(           | 1, H03           | 1, H00           | 1, H05           | 1, HO            | 1, 500           | 1, H00           | 1, HO            | 1, HO            | 1, S03           | 1, S00           | 1, HO            | 1, H0            | 1,100            | 1,103            | 1,10        | 1, 158      | 1,15      |           | 1,       |
| UNS67. 2 HOSA2. 2 | 7,00         | H0171: 1, S0114: | H0656: 1, S0116: | S0358: 1, S0410: | H0580: 1, S0007: | 30045: 1, H0370: | 10357: 1, H0438: | .0623: 1, H0486: | 70114: 1,     | 10250: 1, H0098: | H0036: 1, H0004: | S0010: 1, H0318: | 30049: 1, H0052: | .0738: 1, H0572: | H0562: 1, H0082: | H0051: 1, S0048: | S0388: 1, H0083: | ,0044: 1, H0687: | H0428: 1, H0031: | H0617: 1, S0364: | H0708: 1, S0036: | H0412: 1, H0413: | S0466: 1, H0131: | S0142: 1, L0770: | .0373: 1, L0372: | .0374: 1, ] | .0375: 1, ] | .0657: 1, | ,0659: 1, | .0542:   |
|                   | <u>֚֚֚֓֞</u> | Ħ                | Ħ                | <u>8</u>         | 王                | <u>8</u>         | 重                | <u> </u>         | Ĕ             | 玉                | 耳                | <u> </u>         | <u>8</u>         | ĭ                | 正                | 耳                | <u>x</u>         | 7                | 王                | 王                | 王                | 王                | S                | Š                | <u> </u>         |             | ᆜ           | <u> </u>  |           | <u> </u> |
|                   |              |                  |                  |                  |                  |                  |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |           |           |          |
|                   |              |                  |                  |                  |                  |                  |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | •                |                  |                  |             |             |           |           |          |
|                   |              |                  |                  |                  |                  |                  |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |           |           |          |
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| -                 |              |                  |                  |                  |                  |                  |                  |                  | _             |                  |                  |                  |                  |                  | -                |                  |                  | <u> </u>         |                  |                  | -                |                  |                  |                  | ,                |             |             |           |           |          |
|                   |              | •                |                  |                  |                  |                  |                  |                  |               |                  |                  | •                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |           |           |          |
| -                 | •            | _                |                  |                  |                  | <u></u>          |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             | -         |           |          |
| -                 |              |                  |                  |                  |                  |                  |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |           |           |          |
|                   |              |                  |                  |                  | •                |                  |                  |                  |               |                  |                  |                  |                  |                  | ٠                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |           |           |          |
|                   |              |                  |                  |                  |                  |                  |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |           |           |          |
|                   |              |                  |                  |                  |                  |                  |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             |           |           |          |
|                   |              |                  |                  |                  |                  |                  |                  |                  |               |                  |                  |                  | •                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |             | ,         |           |          |

|   |                     |                     |                     | <del></del>         | -                   |                     |                     | _                   |                     |                        | -                   |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     | 丁                      |                     |   | •                                       | $\neg$                                 |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---|---|--|
|   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                        |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 107777,             | 123829,                                 | 123940,                                 | 139350,                                |
|   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 12q13-q14           |   |   |  |
| L0783: 1, L0663: 1,<br>S0216: 1, L0565: 1,<br>S0126: 1, H0682: 1, | H0684: 1, H0658: 1, | H0648: 1, H0672: 1, | H0651: 1, S0378: 1, | S0380: 1, H0710: 1, | S0152: 1, H0214: 1, | H0576: 1, L0745: 1, | L0753: 1, L0608: 1, | L0594: 1, S0194: 1, | S0276: 1, H0543: 1, | H0423: 1 and S0424: 1. | H0670: 4, H0616: 3, | L0439: 3, L0758: 3, | S0354: 2, H0038: 2, | S0116: 1, H0402: 1, | H0637: 1, S0474: 1, | H0644: 1, H0673: 1, | S0366: 1, H0634: 1, | L0351: 1, L0638: 1, | L0764: 1, L0766: 1, | L0803: 1, L0775: 1, | L0805: 1, L0792: 1, | L0666: 1, H0520: 1, | L0780: 1 and H0542: 1. | S0040: 3, L0748: 3, | S0356: 2, S0358: 2,                     | S0360: 2, H0416: 2,                     | L0752: 2, H0624: 1,                    |
| <u> </u>  |                     |                     |                     | <u> </u>            | <u> </u>            |                     |                     |                     |                     |                        | Ser-42 to Pro-49,   | Asp-86 to Gly-92,   | Lys-97 to Glu-109.  | •                   |                     |                     |                     |                     |                     |                     |                     |                     | •                      | Arg-1 to Pro-15,    | Ser-146 to Arg-155, S0356: 2, S0358: 2, | Leu-168 to Asp-174, S0360: 2, H0416: 2, | Lys-181 to Thr-186, L0752: 2, H0624: 1 |
|   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                        | 2603                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2604                |   |   |  |
|   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                        | 266 - 1396          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         | ,                      | 1209 - 490          |   |   |  |
|   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 428                 |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                        | 429                 |   |   |  |
|   |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                      | 1010596             | , .                 |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                        | 1010698             |   |   |  |
|   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HTTKH22             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HNOIG33             |   |   |  |

| 139350,<br>147570,<br>148040,  | 148043,<br>148070,<br>181430,<br>231550,<br>252940,<br>264700,<br>600194,<br>600231,<br>600536,<br>600808,   | 601284,<br>601769,<br>601928,<br>602116,<br>602153 |  |
|--|--|--|--|
| H0265: 1, H0556: 1,<br>S0116: 1, H0255: 1,<br>S0376: 1, S0278: 1,  | L0471: 1, H0373: 1,<br>S0051: 1, H0356: 1,<br>H0687: 1, H0288: 1,<br>H0634: 1, H0135: 1,<br>H0634: 1, H0551: 1,<br>S0210: 1, L0438: 1,<br>H0658: 1, H0666: 1,<br>S0330: 1, S3014: 1,<br>L0744: 1, L0439: 1,<br>L0745: 1, S0260: 1, | O CAROLL O CANOLL                                  | H0650: 2, H0253: 2,<br>L0769: 2, S0116: 1,<br>H0333: 1, H0421: 1,<br>H0083: 1, H0166: 1,<br>H0616: 1, S0208: 1,<br>L0645: 1, L0655: 1,<br>L0666: 1, H0547: 1,<br>H0593: 1, H0689: 1, |
| Phe-226 to Pro-236. H0265: 1, H0556: 1, S0116: 1, H0255: 1, S0376: 1, S0278: 1, H0257: 1, H0251: 1, H0251: 1 | · T 公开用用公司公司工  |  | Lys-14 to Ala-21, Ser-23 to Lys-31, Glu-38 to Gln-47, Arg-72 to Leu-78, Gln-87 to Asn-94, Ser-110 to Lys-118, I Glu-172 to Lys-182.  |
|  |  |  | 2605   |
|  | •  | ·  | 1085 -<br>1630   |
|  |  |  | 430  |
|  |  |  | 1011090  |
|  |  |  | HPDVK48  |

|           |                       |                     |                     |   |   |   |   |   |                     |                     |                     |   |  |  |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |
|-----------|-----------------------|---------------------|---------------------|---|---|---|---|---|---------------------|---------------------|---------------------|---|--|--|--|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|           | 107970,               | 115650,             | 182600,             | 232700,                                 | 602086,                                 | 602091,                                 | 602616                                  |   |                     |                     |                     |   |  |  |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |
|           | 14q21-q24             |                     |                     |   |   | ٠                                       |   |   |                     |                     |                     |   |  |  |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |
| H0352: 1. | S0003: 17, H0551: 11, | L0483: 9, H0547: 9, | 80212: 7, 80152: 7, | H0521: 7, H0423: 7,                     | L0766: 6, L0666: 6,                     | S0214: 5, S0126: 5,                     | H0543: 5, S0420: 4,                     | S0360: 4, H0411: 4,                     | H0032: 4, H0598: 4, | S0422: 4, L0649: 4, | L0665: 4, L0757: 4, | H0657: 3, S0376: 3,                     | L0717: 3, H0574: 3,                    | H0486: 3, H0069: 3,                    | H0427: 3, H0581: 3,                    | H0046: 3, H0457: 3,                    | H0271: 3, H0622: 3, | H0494: 3, L0667: 3, | L0655: 3, L0659: 3, | H0519: 3, H0672: 3, | H0710: 3, L0754: 3, | L0759: 3, L0593: 3, | L0601: 3, H0422: 3, | H0218: 2, S0040: 2, | H0713: 2, H0717: 2, | H0650: 2, H0656: 2, | 80356: 2, 80132: 2, | S0222: 2, H0333: 2, | H0009: 2, L0157: 2, |
|           | Asn-42 to Pro-48,     | Glu-81 to Lys-86,   | Val-94 to Thr-99,   | Lys-105 to Asp-111, H0521: 7, H0423: 7, | Phe-129 to Glu-142, L0766: 6, L0666: 6, | Ser-154 to Gln-160, S0214: 5, S0126: 5, | Glu-173 to Ala-182, H0543: 5, S0420: 4, | Gln-209 to Glu-234, S0360: 4, H0411: 4, | Asp-259 to Asp-     | 272,                | Ser-303 to Pro-311, | Thr-321 to Asn-329, H0657: 3, S0376: 3, | Ala-335 to Glu-349, L0717: 3, H0574: 3 | Thr-371 to Gly-389, H0486: 3, H0069: 3 | Gln-395 to Asn-405, H0427: 3, H0581: 3 | Thr-415 to Asn-423, H0046: 3, H0457: 3 | Asn-431 to Ser-443, | Lys-475 to Gln-484, | Ser-502 to Gly-507, | Ile-522 to Asn-527. |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
|           | 2606                  |                     |                     |   |   |   |   |   |                     |                     |                     |   |  |  |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |
|           | 3 - 1628              |                     |                     |   |   |   |   |   |                     |                     |                     |   |  |  |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 431                   |                     |                     |   |   |   |   |   |                     |                     |                     |   |  |  |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 1011186               |                     |                     | •                                       |   |   |   |   |                     |                     |                     |   |  |  |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |
|           | HNORJ10               |                     |                     |   |   |   |   |   |                     |                     |                     |   |  |  |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| _                   |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     | _                   | -                  |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  | _                |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|--------------------|---------------------|---------------------|------------------|--------------------|--------------------|------------------|--------------------|------------------|------------------|------------------|------------------|------------------|
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    | -                |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    | •                   |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     | _                   |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  | •                |                  |                  |
| 5: 2,               | .2                  | 1:2,                | 3. 2,               | 2,                  | . 2,                | 2                    | : 2,                | 5:2,                | 4,7                 | 4: 2,               | 2,                  | <br>2,              | 3:2,                | 5. 2,              | 0: 1,              | 6: 1,               | 2: 1,              | ;; <b>1</b> ;       | : 1;                | . T              | ): 1 <b>,</b>      | 5: 1,              | <b>)</b> : 1,    | 0:1,               | ): 1,            | 5: 1,            | 0:1,             | 2: 1,            | 1:1,             |
| H0510: 2, H0375: 2, | S0318: 2, S0316: 2, | H0313: 2, H0591: 2, | H0412: 2, H0413: 2, | S0440: 2, S0002: 2, | H0529: 2, L0520: 2, | .0646: 2, L.0662: 2, | J0806: 2, L0664: 2, | .0565: 2, H0435: 2, | S0328: 2, H0522: 2, | H0696: 2, H0704: 2, | S0404: 2, S0406: 2, | H0436: 2, L0750: 2, | .0588: 2, H0653: 2, | S0192: 2, H0506: 2 | H0624: 1, H0170: 1 | H0686: 1, H0716: 1, | H0341: 1, H0662: 1 | S0418: 1, S0442: 1, | S0358: 1, S0408: 1, | 3476             | H0640: 1, S0300: 1 | H0431: 1, H0415: 1 | H0600: 1, T0060: | H0013: 1, H0250: 1 | H0635: 1, S0280: | H0098: 1, H0575: | H0036: 1, H0590: | H0318: 1, H0052: | H0597: 1, H0081: |
| 2, H                | 2, S(               | 2, H                | 2, H                | 2, S(               | 2, L                | 2, 1                 | 2, L                | 2, H                | 2, H                | 2, H                | 2, S(               | 2, L                | 2, H                | 2, H               | 1, H               | 1, H                | 1, H               | 1, S(               | 1, S(               | 1, S(            | 1, S               | 1, H               | 1, T             | 1, H               | 1, S             | 1, H             | 1, H             | 1, H             | 1, H             |
| 510                 | 318:                | 313:                | 412:                | 40.5                | 529:                | 346:                 | 306:                | 565:                | 528:                | :969                | <u>\$</u>           | 436:                | 588:                | 192:               | 624:               | 686:                | 341:               | <b>118</b> :        | 358:                | <del>4</del> 66. | 649                | 431:               | 900              | 013:               | 635:             | .860             | 036:             | 318:             | 597:             |
| E                   | 803                 | H0.                 | Ή                   | 808                 | Ë.                  | <u>Š</u>             | <u> </u>            | 3                   | <u>S03</u>          | Ŭ<br>H              | <u>8</u> 6          | Ř                   | <u>3</u>            | <u>S</u> 0         | Ř                  | <u>E</u>            | H                  | 200                 | <u>S</u> 0          | Š                | <u>E</u>           | <u>H</u>           | Œ,               | <u>H</u>           | Œ                | <u>H</u>         | HOH              | 丑                | 9                |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    | •                  |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     | ٠                   |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
| '                   |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  | •                  |                    |                  |                    | •                |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      | ·                   |                     |                     |                     |                     |                     |                     |                    |                    |                     | :                  |                     |                     |                  |                    |                    | _                |                    |                  |                  |                  |                  |                  |
|                     | •                   |                     | •                   |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
| $\vdash$            |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
| ١,                  |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
| $\vdash$            |                     |                     |                     |                     |                     |                      | _                   |                     |                     |                     |                     |                     |                     |                    | -                  |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     | ï                   |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     | •                   |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
| $\vdash$            |                     |                     |                     |                     |                     |                      | _                   |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  | _                |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  | •                |                  |
|                     |                     |                     |                     |                     |                     |                      |                     |                     | •                   |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |
| L                   |                     |                     |                     |                     | _                   |                      |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                    |                     |                     |                  |                    |                    |                  |                    |                  |                  |                  |                  |                  |

|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  | _                  |                    |                     |                  |
|--------------------------------------|------------------|------------------|------------------|------------------|--------------------|--------------------|--------------------|------------------|------------------|----------|--------------------|------------------|------------------|---------|------------------|------------|------------------|------------|-------------|------------------|------------------|------------------|------------------|------------------|--------------------|--------------------|---------------------|------------------|
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  | _                  |                    |                     |                  |
| <u></u>                              | · _ ·            | 1,               | <b>.</b> ,       | Ļ,               | <del>_</del> ,     | Ť,                 | <u>,</u>           | 1,               | 1,               |          |                    | <b>_</b>         | •                |         |                  | Ţ,         | Ţ,               |            |             | ľ,               | _ <b>.</b>       | ļ,               | H,               | Ţ,               | 1,                 | 1,                 | 1,                  |                  |
| 14:                                  | 28:              | 128:             | 23:              | <u>4</u> .       | 69                 | .:060              | 516:               | <del>1</del> 88: | 523:             | 70:      | 50: 1              | 42:              | 10:1             | 69:     | 72:              | L0648:     | 74.              | .0654:     | L0635:      | 30:              | 52:              | 391:             | 682:             | 659:             | 330:               | 350:               | 390:                | 6.               |
| HOC. S03                             | H03              | , H0             | , T00            | ,<br>HÖ          | , HO               | Ĕ,                 | , HÕ               | ,<br>HQ          | , HO             | ,<br>103 | , S01              | , SO             | , S02            | ,<br>53 | ,101             | Ĭ,         | ,<br>E           | Ĭ,         | ,106        | ,103             | , 800            | , H00            | , HO             | , HO             | , SO.              | , SO:              | , S0                | ,<br>E           |
| L0471: 1, H0014:<br>H0687: 1, S0312: | S0250: 1, H0328: | H0615: 1, H0428: | H0039: 1, T0023: | H0553: 1, H0644: | H0628: 1, H0169: 1 | H0674: 1, H0090: 1 | H0038: 1, H0616: 1 | H0264: 1, H0488: | H0433: 1, H0623: | 54:1     | .0065: 1, S0150: 1 | H0647: 1, S0142: | S0208: 1, S0210: | 98: 1   | .0637: 1, L0772: | 0773: 1, ] | .0803: 1, L0774: | 0653: 1, ] | .0527: 1, I | .0517: 1, L0530: | .0368: 1, S0052: | S0428: 1, H0691: | H0690: 1, H0682: | H0684: 1, H0659: | H0670: 1, S0330: 1 | H0518: 1, S0350: 1 | H0727: 1, S0390: 1, | S0028: 1, L0740: |
| 104<br>108<br>108                    | S02              | 90H              | 00H              | H05              | 90H                | )<br>H06           | 00H                | H02              | H04              | 105      | <u>Š</u>           | 90H              | <b>S02</b>       | 105     | 907              | <u>104</u> | <u>807</u>       | 106        | L05         | 105              | <u> </u>         | S04.             | H06              | 90H              | 90H                | H05                | H07                 | <u>S</u> 00.     |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          | •                  |                  |                  | ,       |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  | -                  |                    | -                  |                  |                  |          | <u>·</u>           |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  | •                |         |                  | -          |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    | •                  |                  |                  |          |                    |                  |                  |         |                  | •          |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  | _                  |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      | -                |                  | _                |                  |                    |                    |                    |                  |                  | -        |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  | _                  |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  | ٠                  |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |
|                                      |                  |                  |                  |                  |                    |                    |                    |                  |                  |          |                    |                  |                  |         |                  |            |                  |            |             |                  |                  |                  |                  |                  |                    |                    |                     |                  |

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|  |   |  |   |  |
| L0751: 1, L0779: 1,<br>L0777: 1, L0780: 1,<br>L0753: 1, L0731: 1,<br>H0445: 1, H0595: 1,<br>S0434: 1, S0436: 1,<br>L0591: 1, S0011: 1,<br>H0668: 1, S0196: 1,<br>L0469: 1, S0424: 1 and<br>S0458: 1. | H0658: 3, L0748: 3,<br>H0052: 1 and L0741: 1. | AR033: 2, AR089: 2,<br>AR039: 2, AR061: 2,<br>AR055: 1, AR096: 1,<br>AR060: 1, AR104: 1,<br>AR053: 0 | AR053: 3, AR089: 2,<br>AR096: 1, AR060: 1,<br>AR055: 1, AR104: 1,<br>AR033: 1, AR039: 1,<br>AR061: 0<br>H0415: 3, H0539: 2,<br>H0355: 1 and H0375: 1. | AR096: 1, AR060: 1,<br>AR061: 1, AR033: 1,<br>AR089: 1, AR039: 1,<br>AR053: 0, AR055: 0,<br>AR104: 0<br>H0415: 2 |
|  | Pro-51 to Phe-57,<br>Ser-87 to Thr-94.        | 2, 6, 5  |   | Pro-9 to Arg-15, Ala-17 to Thr-26, Pro-39 to Lys-45, Asp-54 to Ala-61, Leu-86 to Gly-91, Phe-99 to Thr-106.      |
|  | 2607  | 2608   | 2609  | 2610   |
|  | 1 - 291                                       | 2 - 544  | 3 - 680   | 126 - 542  |
| ,  | 432   | 433  | 434   | 435  |
|  | 1011209                                       | 1011303  | 1011315   | 1011316  |
|  | HPDRG92                                       | НОFМQ81  | HOFNF27   | HOFND52  |

|                  |                   |                   |                   |                           |              |             | <del>-</del> |                   |                            |              |   |             |          |                        |                   |                  |                 |      |                    |                       |                     |                     |                     |                     |                     |                    |                     |                     | $\neg$             |
|------------------|-------------------|-------------------|-------------------|---------------------------|--------------|-------------|--------------|-------------------|----------------------------|--------------|---|-------------|----------|------------------------|-------------------|------------------|-----------------|------|--------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|--------------------|
|                  |                   |                   | •                 |                           |              |             |              |                   |                            |              |   |             |          |                        |                   |                  |                 |      |                    | 133701,               | 168500,             | 171650,             | 176930,             | 176930,             | 600623,             | 600811,            | 826009              |                     |                    |
|                  |                   |                   |                   |                           |              |             |              |                   |                            |              |   |             |          |                        |                   |                  |                 |      |                    | 11p11.2               |                     |                     |                     |                     |                     |                    |                     |                     |                    |
|                  |                   | 2, AR053: 1,      | l, AR096: 1,      | R039: 1,                  | I, AR033: 1, | , AR104: 0  |              | , AR096: 1,       | 1, AR060: 1,               | l, AR053: 0, |   | 0, AR055: 0 |          |                        |                   |                  |                 |      |                    | 10,                   | 7, 1                | 60: 4,              | 128: 4,             | 65: 3,              | 570: 3,             | 50: 3,             | 62: 2,              | 13: 2,              | 124: 2,            |
| H0415: 1         |                   | AR052: 2, A       | •                 |                           |              | AR061: 1, A | H0415: 2     | AR052: 1, A       | •                          |              | _ | . –         | H0415: 4 | H0415: 2               |                   |                  |                 |      |                    | H0620: 11, H0683: 10, | H0483: 7, H0046: 7, | H0687: 6, S0360: 4, | H0012: 4, H0428: 4, | .0471: 3, L0665: 3, | H0520: 3, H0670: 3, | H0672: 3, L0750: 3 | H0624: 2, H0662: 2, | H0333: 2, H0013: 2, | H0530: 2, H0024: 2 |
|                  | Asp-62.           |                   |                   | Cys-111 to Asp-116.AR055: | <u>{</u>     | <u> </u>    | <del>1</del> |                   | Fhr-171 to Lys-180. AR089: | <u>[</u>     | Y | <u>{</u>    |          |                        | Val-55,           | Thr-91,          | Asn-            | 1    | o Lys-175.         | 1                     | Ē                   | 耳                   | Ħ                   | ĭ                   | Ĥ                   | Ä.                 | İ                   | Ĭ                   | H                  |
| Pro-3 to Ala-17, | Asn-56 to Asp-62. | Pro-26 to Arg-32, | Gly-68 to Glu-75, | Cys-111 to                | •            |             |              | Ala-39 to Thr-44, | Thr-171 tc                 |              |   |             |          | 2614 Ser-13 to Glu-26, | Ser-48 to Val-55, | Lys-85 to Thr-91 | Asp-115 to Asn- | 126, | Asp-169 to Lys-175 |                       |                     |                     |                     |                     |                     |                    |                     |                     |                    |
| 2611             |                   | 2612              | ٠                 |                           |              |             |              | 2613              |                            |              |   |             |          | 2614                   |                   | _                |                 |      |                    | 2615                  |                     |                     |                     | •                   |                     |                    |                     | ,                   |                    |
| 3 - 575          |                   | 2 - 1183          |                   |                           |              |             |              | 62 - 1249         |                            | -            |   |             |          | 1 - 639                |                   |                  | •               |      |                    | 915 - 364             |                     |                     |                     |                     |                     |                    |                     |                     |                    |
| 436              |                   | 437               |                   |                           |              |             |              | 438               |                            |              |   |             |          | 439                    |                   |                  |                 |      |                    | 440                   |                     |                     |                     |                     |                     |                    |                     |                     |                    |
| 1011321          |                   | 1011332           |                   |                           |              |             |              | 1011360           |                            |              |   |             | ٠        | 1011499                |                   |                  |                 |      |                    | 1011537               |                     |                     |                     | •                   |                     |                    |                     | •                   |                    |
| HOFNL96          |                   | HOFNF53           |                   |                           |              |             |              | HOFMU61           |                            |              |   |             |          | HOFOF35                | _                 |                  |                 |      |                    | HULFJ37               |                     |                     |                     |                     |                     |                    |                     |                     |                    |

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| H0594: 2, L0381: 2, | H0144: 2, H0547: 2, | 10435: 2, L0593: 2, | .0601: 2, H0352: 2, | 10294: 1, H0341: 1, | 10661: 1, H0664: 1, | H0240: 1, S0354: 1, | S0358: 1, S0376: 1, | HO675: 1, S0007: 1, | 30046: 1, H0369: 1, | H0370: 1, H0587: 1, | H0497: 1, H0642: 1, | HO575: 1, S0049: 1, | H0204: 1, H0596: 1, | H0178: 1, H0011: 1, | H0266: 1, H0290: 1, | F0006: 1, H0424: 1, | S0364: 1, H0616: 1, | H0087: 1, H0412: 1, | H0413: 1, H0100: 1, | H0647: 1, H0652: 1, | S0210: 1, L0369: 1, | .0769: 1, L0373: 1, | .0771: 1, L0364: 1, | .0649: 1, L.0775: 1, | .0375: 1, L0651: 1,                   | .0776: 1, L.0659: 1, | .0517: 1, L0783: 1, | J. 1, T.0809: 1, | .0519: 1, L0663: 1, |
| H                   | H                   | <u>н</u>            | <u> </u>            | H                   | <u>н</u>            | <u>H</u>            | Š                   | H                   | <u>S</u>            | H                   | <u> </u>            | <u> </u>            | <u>.</u>            | <u>E</u>            | <u></u>             | <u> </u>            | S                   | <u> </u>            | Œ                   | <u>æ</u> .          | S                   | <u> </u>            | <u>고</u>            | <u> </u>             | <u>.</u>                              |                      | ᆸ                   |                  |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                      | · · · · · · · · · · · · · · · · · · · |                      |                     |                  |                     |
|                     |                     | •                   |                     |                     |                     |                     |                     | ···                 |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                                       |                      |                     |                  |                     |
|                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | · -                 |                     |                     |                     |                     |                     |                     |                      |                                       |                      |                     |                  |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ſ                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                      |                                       | ٠                    |                     |                  |                     |

|  | 133780,<br>266150,<br>276903,<br>276903,<br>276903 | 133780,<br>266150,<br>276903,<br>276903   |
|--|--|---|
|  | 11913.5  | 11q13.5   |
| S0053: 1, H0519: 1,<br>H0658: 1, H0660: 1,<br>H0666: 1, S0027: 1,<br>L0743: 1, L0740: 1,<br>L0779: 1, L0749: 1,<br>L0779: 1, L0777: 1,<br>L0752: 1, L0753: 1,<br>H0445: 1, H0595: 1 and<br>L0595: 1. | H0415: 5   | Arg-6 to Gly-13, Gln-132 to Glu-137, H0135: 24, S0126: 20, Arg-179 to Ala-200, H0619: 14, L0750: 14, Ala-209 to Lys-215, S0418: 12, S0360: 12, Glu-218 to Asp-227, H0547: 12, S0028: 12, Pro-239 to Lys-244, L0754: 12, L0659: 11, Tyr-276 to Lys-283, H0123: 10, L0665: 9, Ile-361 to Asp-367, H0693: 9, S3014: 9, Met-371 to Asp- L0654: 8, L0595: 8, Asp-391 to Lys-411, H0050: 7, L0363: 7, Pro-440 to Leu-449. L0666: 7, L0601: 7, S0212: 6, L0717: 6, H0599: 6, H0024: 6, |
|  | Arg-1 to Gly-7.                                    | Arg-6 to Gly-13, L0747: 55, H055 Gln-132 to Glu-137, H0135: 24, S0126, Arg-179 to Ala-200, H0619: 14, L0750, Ala-209 to Lys-215, S0418: 12, S0360: Glu-218 to Asp-227, H0547: 12, S0028: Pro-239 to Lys-244, L0754: 12, L0659: Tyr-276 to Lys-283, H0123: 10, L0659: Ile-361 to Asp-367, H0693: 9, S0040: 8 376, L0554: L0559: 8 Asp-391 to Lys-411, H0050: 7, L0363: Pro-440 to Leu-449. L0666: 7, L0601: GH0599: 6, H0081: H0012: 6, H0024:                                   |
| , .  | 2616   | 2617  |
|  | 2 - 1024   | 136 - 1482  |
|  | 441  | 442   |
|  | 1011607  | 1011608   |
|  | HOFME75  | HOPKO74   |

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|                     |                     |                     |                  | <del>,</del>        |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                    |                    |                    |                    |                    |                     |                     |                    |                    |                     |                     |                    |                    |                      |                  |
| 6,                  | ·                   | 5,                  | 5,               | 5,                  | 5,                  | 5,                  | 5,                  | 5,                   | <del>-</del>        | <del></del>         | 4,                  | 4,                  | 4,                  | 4.                  | 4,                 | 4,                 | <b>4</b> ,         | 4,                 | 4,                 | 3,                  | 3,                  |                    | 3,                 | 3,                  | 3,                  | 3,                 | 3,                 | 3,                   | 3,               |
| S0250: 6, H0623: 6, | H0520: 6, S0390: 6, | S0436: 6, L0593: 6, | 10645: 5, H0545: | .0483: 5, H0553: 5, | 10040: 5, L0770: 5, | .0565: 5, H0519: 5, | H0684: 5, S0037: 5, | .0743: 5, L.0605: 5, | S0342: 4, S0420: 4, | 30376: 4, S0045: 4, | 30046: 4, H0486: 4, | H0286: 4, H0286: 4, | H0100: 4, L0769: 4, | .5565: 4, L0662: 4, | 0649: 4, L0776: 4, | 0663: 4, H0658: 4, | 0749: 4, L0731: 4, | 0757: 4, L0597: 4, | 0591: 4, H0352: 4, | 10624: 3, H0265: 3, | H0556: 3, S0476: 3, | H0013: 3, H0253: 3 | H0544: 3, H0428: 3 | 10031: 3, H0644: 3, | .0762: 3, L0637: 3, | 5566: 3, L0768: 3, | 0775: 3, L0375: 3, | .0657: 3, L.0664: 3, | S0152: 3, L0744: |
| 80250               | H0520               | S0436               | H0645            | L0483               | H004C               | 1.0565              | H0684               | L0743                | S0342               | S0376               | S0046               | H0266               | H010C               | L5565               | 10649              | T0663              | L0749              | 1.0757             | 10591              | H062                | H0556               | H0013              | H054               | H0031               | L0762               | T2566              | L0775              | L0657                | S0152            |
|                     |                     |                     |                  |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                    |                    |                    |                    |                    |                     |                     |                    |                    |                     |                     |                    |                    |                      |                  |
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|                     | <del></del>         |                     |                  |                     |                     |                     | -,                  |                      |                     |                     |                     |                     |                     |                     |                    |                    | <del></del> ,      |                    |                    |                     |                     |                    |                    |                     |                     |                    |                    |                      |                  |
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| .0748: 3, L.0740: 3, | .0751: 3, H0295: 2, | S0298: 2, H0661: 2, | S0356: 2, H0676: 2, | H0592: 2, H0333: 2, | roo39: 2, Too60: 2, | H0635: 2, H0251: 2, | H0046: 2, L0471: 2, | H0594: 2, H0292: 2, | H0615: 2, H0634: 2, | H0413: 2, H0059: 2, | .0564: 2, S0440: 2, | S0210: 2, S0422: 2, | .0598: 2, H0529: 2, | .0806: 2, L0653: 2, | .0438: 2, H0689: 2, | H0672: 2, H0521: 2, | S0406: 2, H0555: 2, | S3012: 2, S0032: 2, | .0755: 2, H0445: 2, | .0596: 2, L0588: 2, | .0589: 2, L.0590: 2, | S0192: 2, H0739: 1, | H0171: 1, H0713: 1, | H0717: 1, H0716: 1, | 70049: 1, H0669: 1, | H0663: 1, H0664: 1, | H0662: 1, H0638: 1, | S0354: 1, S0358: 1, | S0410: 1, H0729: 1, |
| 107                  | 100                 | S02                 | S03                 | SOH<br>HOS          | <u> </u>            | H06                 | )OH                 | HOS                 | HOC                 | HOV                 | 105                 | S02                 | 507                 | 108<br>1708         | <u>170</u>          | )OH                 | <u>S04</u>          | S30                 | <u> 1707</u>        | 507                 | 105                  | S01                 | HO                  | , HOT               | T00                 | HOC                 | Ю <u>Н</u>          | S03                 | S04                 |
|                      |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | · · · · · ·         |                     |                     |                     |                     | •                   |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |
|                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | •                   |                     |                     |                      |                     |                     |                     |                     | · .                 |                     | ·<br>               | !                   |
|                      |                     |                     |                     |                     |                     |                     |                     |                     | -7-1                |                     |                     |                     | -                   |                     |                     |                     |                     | ·<br>———            |                     |                     | _                    |                     | -                   |                     |                     |                     |                     |                     |                     |
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|                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |
| H0730: 1, H0734: 1, | H0437: 1, H0550: 1, | H0441: 1, H0431: 1, | H0392: 1, H0249: 1, | H0586: 1, H0587: 1, | H0497: 1, H0632: 1, | F0114: 1, H0156: 1, | ,0021: 1, H0575: 1, | T0048: 1, H0318: 1, | 30049: 1, H0309: 1, | H0546: 1, H0041: 1, | H0172: 1, H0620: 1, | T0003: 1, H0057: 1, | H0051: 1, H0375: 1, | H0897: 1, H0290: 1, | H0284: 1, H0252: 1, | 10604: 1, H0628: 1, | H0617: 1, H0606: 1, | 10598: 1, H0063: 1, | H0087: 1, H0056: 1, | H0494: 1, H0560: 1, | H0359: 1, H0561: 1, | S0306: 1, H0647: 1, | H0646: 1, S0208: 1, | S0002: 1, L0369: 1, | .0763: 1, L0772: 1, | .0641: 1, L.0642: 1, | .0643: 1, L0764: 1, | L0765: 1, L0648: 1, | .0650: 1, L0774: 1, |
|                     | H                   | . <b>=</b> .        |                     |                     |                     |                     |                     |                     |                     |                     |                     | F-2-                |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                      |                     | :                   | 1.                  |
|                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u> </u>            |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |
| L0651: 1, L0508: 1, | L0656: 1, L0782: 1, | L0783: 1, L0383: 1, | L0519: 1, L0545: 1, | L0543: 1, L5623: 1, | L0793: 1, S0006: 1, | H0144: 1, H0682: 1, | H0435: 1, H0660: 1, | H0539: 1, H0522: 1, | H0694: 1, L0439: 1, | L0758: 1, L0362: 1, | S0011: 1, H0668: 1, | H0665: 1, H0667: 1, | S0194: 1, S0196: 1, | H0542: 1, S0042: 1 and | H0008: 1. | H0659: 16, L0747: 15, | S0358: 14, L0005: 13, | L0758: 9, S0360: 8, | L0775: 8, H0648: 8, | H0657: 6, L0731: 6, | L0757: 6, H0341: 5, | H0412: 5, S0440: 5, | H0658: 5, H0710: 5, | L0750: 5, L0588: 5, | S0007: 4, S0046: 4, | H0599: 4, L0520: 4, | L0764: 4, L0768: 4, | H0170: 3, H0306: 3, | H0125: 3, S0408: 3, |
|                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                        |           | Pro-11 to Phe-16,     | Thr-48 to Ser-60.     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2618                  |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                        |           | 57 - 266              |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 443                   |                       |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | •                   |                     | •                   |                     |                     |                     |                     |                     |                     |                        |           | 1011755               |                       |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HCBBA51               |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3   |  |   | .; ;; ;; ;; ;; ;; ;; ;; ;; ;; ;; ;; ;; ;                    | . 7 2               | . 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, | . 5, 5,             | 2,                  | . 2, 2,                                    | . 2,                |                    | 5: 1,            | : 1,<br>: 1,                            | 9. 1,<br>7: 1,                        |
| H0309: 3, H0039: 3<br>H0617: 3, H0413: 3<br>L0809: 3, L0519: 3,<br>S0126: 3, S0406: 3, | H0576: 3, H0422: 3, S0134: 2, L0808: 2, S0116: 2, H0661: 2, S0116: 2, H0661: 2, S0116: 2, H0661: 2, S0116: | H0663: 2, H0393: 2,<br>L0394: 2, S0222: 2,<br>H0586: 2, L0622: 2, | .0623: 2, H0486: 2, F0109: 2, S0280: 2, H0581: 2. H0596: 2. | H0231: 2, S0003: 2, | HO598: 2, HO100: 2, S0438: 2, HO633: 2,                    | .0772: 2, L0521: 2, | 30374: 2, H0672: 2, | 80328: 2, 80330: 2,<br>80152: 2, 80032: 2, | L0755: 2, L0759: 2, | S0026: 2, T0002: 1 | H0686: 1, H0685: | 50024: 1, f10234:<br>F0049: 1, S0282: ] | H0255: 1, H0669: H0664: 1, H0177:     |
| H00<br>H00<br>L08<br>S01   | 801<br>S01   | H 1.0H  | 10 H  | HO.                 | SQ. H  |                     | SOS                 | SO SO                                      |                     | <u> </u>           | HO               | 00 <u>F</u>                             | OH H                                  |
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| S0376: 1, S0444: 1, | S0410: 1, S0045: 1, | S0132: 1, H0411: 1, | S0278: 1, S6022: 1, | H0441: 1, H0609: 1, | F0039: 1, H0013: 1, | H0635: 1, H0042: 1, | T0048: 1, H0421: 1, | H0173: 1, H0052: 1, | H0204: 1, H0597: 1, | H0044: 1, H0546: 1, | H0046: 1, H0150: 1, | H0009: 1, H0023: 1, | H0373: 1, L0163: 1, | H0201: 1, S0048: 1, | S0388: 1, S0051: 1, | H0408: 1, H0238: 1, | H0622: 1, T0023: 1, | H0031: 1, H0606: 1, | H0673: 1, H0163: 1, | H0040: 1, H0634: 1, | H0616: 1, T0069: 1, | F0041: 1, H0494: 1, | H0646: 1, S0144: 1, | S0142: 1, S0344: 1, | L0598: 1, L0762: 1, | L0763: 1, L0769: 1, | L0637: 1, L0761: 1, | L0373: 1, L0773: 1, | L0522: 1, L0803: 1, |
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| L0774: 1, L0375: 1,<br>L0653: 1, L0542: 1,<br>L0782: 1, L0783: 1,<br>L0789: 1, S0428: 1,<br>S0053: 1, H0690: 1,<br>H0682: 1, H0670: 1,<br>H0651: 1, S0378: 1,<br>S0380: 1, H0134: 1,<br>H0436: 1, S027: 1,<br>L0751: 1, S0260: 1,<br>H0445: 1, S0394: 1,<br>S0011: 1, H0653: 1, | H0423: 1. | L0777: 4, L0747: 3, | S0007; 1, H0351; 1,<br>H0550; 1, H0013; 1, | H0570: 1, H0123: 1, |                     | H0553:              | L0759: 1 and H0352: 1. | -                   | -                   |                     |                     |                   |                   | L0771: 5, L0439: 5, | L0761: 4, L0794: 4,                     | L0809: 4, L0666: 4, |
|   |           | Gly-1 to Glu-11,    | Arg-54 to Ser-60,<br>Pro-68 to GIV-78.     | Pro-92 to Gly-126,  | Ala-134 to Asn-143, | Thr-145 to Gly-162, | Gly-173 to Ser-179,    | Lys-187 to Leu-194, | Glu-205 to Ser-213, | Ser-283 to Phe-289, | Ala-306 to Glu-313. | Pro-28 to Gln-35, | Leu-71 to Pro-77. | Thr-121 to Asn-126, | Ala-134 to Ala-140, L0761: 4, L0794: 4, | Arg-174 to Arg-184, |
|   |           | 2619                |  |                     |                     |                     |                        |                     |                     |                     |                     | 2620              |                   | 2621                | ,                                       | j                   |
|   |           | 31 - 972            |  |                     |                     |                     |                        |                     |                     |                     |                     | 3 - 248           |                   | 2-817               |   |                     |
|   |           | 444                 |  |                     |                     |                     | ·                      |                     |                     |                     |                     | 445               |                   | 446                 |   |                     |
|   |           | 1011773             |  |                     |                     |                     |                        |                     |                     |                     |                     | 1011821           |                   | 1011830             |   |                     |
|   |           | HDHEB13             |  |                     |                     |                     |                        |                     |                     |                     |                     | HDTMG36           |                   | HVVCJ38             | •                                       |                     |

|                     |             |                                 |                      |                     |                     |                     |                   |                    |                  |                  |                  |                  |                  |                  |                  |             |              |  |                  | -                |                  |                  |                  |              |              |           |              |             | 1     |
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|                     |             |                                 |                      |                     |                     |                     |                   | -                  |                  |                  | ·                |                  |                  |                  |                  |             |              |  |                  |                  | <u>-</u>         |                  |                  |              |              |           |              |             |       |
| _                   |             |                                 |                      |                     | -                   |                     |                   |                    |                  |                  |                  |                  |                  |                  |                  |             |              |  |                  | _                | _                |                  |                  |              |              |           |              |             |       |
| 758: 4              | 638: 3,     | L0770: 3,                       | 559: 3,              | 562: 2,             | 144: 2,             | 300: 2,             | 539: 2,           | 750: 2,            | 583: 1,          | 483: 1,          | 418: 1,          | 60: 1,           | 486: 1,          | 250: 1,          | 253: 1,          | , H0194: 1, | , H0546: 1,  | 024: 1,                                      | 688: 1,          | 124: 1,          | 163: 1,          | 038: 1,          | 509: 1,          | L0371: 1,    | L0638: 1,    | .0648: 1, | L0804: 1,    | L0629: 1,   | 4,500 |
| L0743: 4, L0758: 4  | 0661: 3, H0 | 0618: 3, LO                     | .0803: 3, L.0659: 3, | .0790: 3, H0662: 2, | H0181: 2, S0144: 2, | S0142: 2, L0800: 2, | 0663: 2, H0539: 2 | .0740: 2, L0750: 2 | H0713: 1, H0583: | S0212: 1, H0483: | H0402: 1, S0418: | S0356: 1, S0360: | S0222: 1, H0486: | 70109: 1, H0250: | H0253: 1, H0253: |             | HO544: 1, HC | H0545: 1, H0024:                             | H0355: 1, H0688: | H0617: 1, H0124: | H0135: 1, H0163: | H0413: 1, S0038: | 70041: 1, H0509: | H0529: 1, L0 | .0769: 1, LO |           | .0662: 1, LO | 0775: 1, L0 |       |
| 1                   |             | Arg-258 to Gly-263. H0618: 3, 1 | 크                    | ĭ                   | 直                   | <u>x</u>            | <u> </u>          | ĭ                  | 萬                | <u>X</u>         | 革                | S                | <u>X</u>         | <u> </u>         | Ē                | <b>庄</b>    | 耳            | 耳  | 耳                | 茁                | 耳                | 耳                | Ĕ                | <u> </u>     | <u> </u>     | <u> </u>  | ĭ            | <u> </u>    | 1     |
| Ser-194 to Glu-199. | Met-208 to  | Arg-258 to                      |                      |                     | •                   |                     |                   |                    |                  |                  |                  |                  |                  | -                |                  |             |              | •  |                  |                  |                  |                  |                  |              |              |           |              | :.          |       |
|                     | - <u></u>   |                                 |                      |                     |                     |                     |                   |                    |                  |                  |                  |                  |                  |                  |                  |             |              | _  |                  |                  |                  |                  | -                |              |              |           |              | . :         |       |
|                     | -           |                                 |                      |                     |                     |                     |                   |                    |                  |                  |                  |                  |                  |                  |                  |             |              |  |                  |                  |                  |                  |                  |              |              |           |              |             | -     |
| -                   |             |                                 |                      |                     |                     |                     |                   |                    |                  |                  |                  |                  |                  |                  |                  |             |              |  |                  |                  | -, -             |                  |                  |              |              |           |              |             | _     |
|                     |             |                                 |                      |                     |                     |                     |                   | _                  | , <u>-</u>       |                  |                  | _                |                  |                  | _                |             |              | <u>.                                    </u> |                  |                  |                  |                  |                  |              |              |           |              |             | _     |
|                     |             |                                 |                      |                     |                     |                     |                   |                    |                  |                  |                  |                  |                  |                  |                  |             |              |  |                  |                  |                  |                  |                  |              |              |           |              |             |       |
|                     |             |                                 |                      |                     |                     |                     |                   |                    |                  |                  | ,                |                  |                  |                  |                  | v           |              |  |                  |                  |                  |                  |                  |              |              |           |              |             |       |

| L0647: 1, L0791: 1,<br>L0438: 1, H0519: 1,<br>H0435: 1, H0658: 1,<br>H0670: 1, H0672: 1,<br>S0328: 1, H0521: 1,<br>H0436: 1, L0741: 1,<br>L0749: 1, L0779: 1,<br>L0759: 1, H0445: 1, | H0682: 1                               | L0748: 18, L0749: 8, | L0755: 7, H0686: 4, | S0360: 3, H0519: 3, | H0659: 3, L0747: 3,                     | L0758: 3, H0341: 2, | H0622: 2, H0040: 2, | H0616: 2, L0772: 2, | L0375: 2, L0754: 2, | L0779: 2, H0542: 2, | H0294: 1, H0657: 1, | H0656: 1, S0116: 1, | H0663: 1, H0638: 1, | S0376: 1, H0393: 1, | H0083: 1, H0030: 1, | L0055: 1, H0068: 1, | H0591: 1, H0038: 1, | H0412: 1, H0100: 1, | L0475: 1, S0422: 1, | L0763: 1, L0771: 1, |
|--|--|----------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  | Pro-18 to Gln-36,<br>Ser-43 to Ala-57. | Arg-13 to Arg-19,    |                     | Glu-127 to Asp-132, | Asn-152 to Glu-171, H0659: 3, L0747: 3, | Ala-179 to Ala-193. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 2622                                   | 2623                 |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |
|  | 1 - 180                                | 107 - 727            |                     |                     | •                                       |                     |                     |                     | -                   |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 447                                    | 448                  |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 1011840                                | 1011847              |                     |                     |   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | HPAMY22                                | HE9CP86              |                     | ,                   |   |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     | :                   |                     |

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|                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                        |           |                     |    | ·                   |                     |                     |                     |                  |                     |                     |                     |                     | _                   |                     |                     |                     | :        |                     |
| L0767: 1, L0768: 1, | L0784: 1, L0776: 1. | L0633: 1, L0783: 1, | L0665: 1, H0144: 1, | H0682: 1, S0378: 1, | H0627: 1, L0752: 1, | L0731: 1, S0026: 1, | H0665: 1, S0242: 1 and | H0543: 1. | H0658: 2, L0750: 2, | L0806: 1, L0790: 1 and | L0779: 1. | H0575: 1 and H0009: | 1. | AR033: 6, AR089: 5, | AR096: 4, AR055: 3, |                     | AR053: 2, AR061: 2, | AR039: 1, AR104: | L0779: 4, H0428: 3, | L0773: 2, L0662: 2, | L0659: 2, L0602: 2, | L0777: 2, L0596: 2, | L0608: 2, H0170: 1, | H0580: 1, S0045: 1, | L0471: 1, H0628: 1, | L0770: 1, L0761: 1, | <u> </u> | L0657: 1, L0512: 1, |
|                     |                     |                     |                     | :                   |                     |                     |                        |           |                     |                        |           |                     |    | Val-7 to Ser-12,    | Leu-79 to Asn-87,   | Lys-120 to Ala-125, | Ala-166 to Arg-171, |                  | Gln-234 to Pro-241, | Asp-285 to Gln-290. |                     |                     |                     |                     |                     |                     |          |                     |
|                     |                     |                     |                     | ,                   |                     |                     |                        |           | 2624                |                        |           | 2625                |    | 2626                |                     |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |
|                     |                     |                     |                     |                     |                     |                     |                        |           | 24 - 692            |                        |           | 3 - 425             |    | 21 - 905            |                     |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |
|                     |                     |                     |                     |                     |                     |                     |                        |           | 449                 |                        |           | 450                 |    | 451                 |                     |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |
|                     |                     | •                   |                     | •                   |                     |                     | •                      |           | 1011883             |                        |           | 10111901            |    | 1011919             |                     |                     |                     | •                |                     | •                   |                     |                     | •                   |                     |                     |                     |          |                     |
|                     | ,                   |                     |                     |                     |                     | 9, 6                | ,                      |           | HPDOU46             |                        |           | HFCDW73             |    | HOVEB13             |                     |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     | ,        |                     |

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|   |  |                  |                        |           |                    |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           |          |                  |          |
| - |  |                  |                        |           |                    | · ·                 |                     |                     |                  |                  |                  |                  | •                   |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           |          | <u>·</u>         |          |
|   |  |                  |                        |           | i                  |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           |          |                  |          |
| - |  |                  | <u> </u>               |           |                    |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           |          |                  |          |
|   | - <b>.</b> -:                            | î Ļî             | S0031: 1, H0543: 1 and |           | : 6,               | 4,                  | ິຕ໌                 | ຕ໌                  | ູ້ຕໍ             |                  | 2,               | ر<br>ب           | . ત્                | ζ,                  | 2,                 | <b>4</b> ,       | <del>-</del>     | <del></del> î.   | l,        | 1,               | <del>-</del> 1 | <b>1</b> , | Ţ,        | 1,        | 1,               | 1,        | T,       | 1,               | 1,       |
|   | 0672:<br>7740:                           | 757:             | 543:                   |           | 99/0               | 414:                | 360:                | :999                | 731:             | .9/9(            | 0457:            | 0038:            | 3770:               | 144:                | 0436:              | 485:             | )624:            | )657:            | l, S0358: | 0431:            | H0013:         | , H0194:   | I, H0020: | l, H0375: | 3003:            | S0386:    | S0438:   | )422:            | , L0765: |
|   | 1, H                                     | 1,1              | 1, HC                  | -         | F. 8, I            | 6, S0               | 4, SO               | 3, IC               | 3, LC            | 2, H(            | 2, H             | 2, H             | 2, L                | 2, H(               | 2, H               | 2, IC            | 2, H(            | 1, H(            | 1, S(     | 1, H             | •              |            | 1, H      | 1, 用      | 1, S(            | 1, S(     |          | 1, S(            | 1, L     |
| 1 | H0682: 1, H0672: ]<br>L0748: 1. L0740: 1 | .0749: 1, L0757: | 0031:                  | H0677: 1. | L0754: 8, L0766: 6 | .0439: 6, S0414: 4, | .0758: 4, S0360: 3, | .0803: 3, L0666: 3, | ,0756: 3, L0731: | 30218: 2, H0676: | 10251: 2, H0457: | 10083: 2, H0038: | 10616: 2, L0770: 2, | .0775: 2, H0144: 2, | 10682: 2, H0436: 2 | .0752: 2, L0485: | .0594: 2, H0624: | 30430: 1, H0657: | 10341: 1  | 10411: 1, H0431: | r0039: 1       | .0021: 1   | H0050:    | H0051: 1  | H0594: 1, S0003: | H0272: 1, | H0494:   | H0652: 1, S0422: | H0529: 1 |
| ľ | I.                                       | בו               | S                      | H         |                    | ב                   | 크                   | 그                   | 그                | <u> </u>         | Ξ                | 王                | 王                   | 그                   | 丑                  |                  |                  | <u>w</u>         | 王         | 王                | Ĥ              | <u> </u>   | 工         | 耳         | 王                | 王         | 王        | Ξ.               | H        |
|   |  |                  |                        |           |                    |                     |                     |                     |                  |                  |                  |                  | ,                   |                     |                    |                  |                  | ٠.               |           |                  |                | •          |           |           |                  |           |          | •                |          |
|   |  |                  |                        |           |                    |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           |          |                  |          |
| 1 |  |                  |                        | •         |                    |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  | •                |           |                  |                |            |           |           |                  |           |          |                  |          |
| - |  |                  | _                      |           | 27                 |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  | •                |           |                  |                |            |           |           |                  |           | <u> </u> |                  |          |
| L |  |                  |                        |           | 2627               |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           | <u>.</u> |                  |          |
|   |  |                  |                        |           | 74 - 1114          |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  | •                |                  |           |                  |                |            |           |           | :                |           |          |                  |          |
|   |  |                  |                        |           | 74 -               |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           |          |                  |          |
|   |  |                  |                        | ٠         | 452                |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           |          |                  |          |
| f |  |                  |                        |           |                    | •                   |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           | -        |                  |          |
|   |  |                  |                        |           | 1011948            |                     |                     |                     | •                |                  |                  |                  |                     | -                   |                    |                  |                  | •                |           |                  |                |            |           |           |                  |           |          | •                |          |
|   |  |                  |                        |           | 10                 |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           |          |                  |          |
|   |  |                  |                        |           | (S93               |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           |          |                  |          |
|   |  |                  |                        |           | HPAMS93            |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           |          |                  |          |
| L |  |                  |                        |           | 五                  |                     |                     |                     |                  |                  |                  |                  |                     |                     |                    |                  |                  |                  |           |                  |                |            |           |           |                  |           |          |                  |          |

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|   |  | 151670,<br>191010,<br>601780   |
|   |  | 15922.1  |
| L0771: 1, L0521: 1,<br>L0804: 1, L0774: 1,<br>L0651: 1, L0776: 1,<br>L0655: 1, L0659: 1,<br>L0789: 1, L0647: 1,<br>L0789: 1, L0790: 1,<br>L0663: 1, L0790: 1,<br>L0663: 1, L0790: 1,<br>L0665: 1, S0374: 1,<br>L0438: 1, H0519: 1,<br>S0188: 1, H0478: 1,<br>H0626: 1, S0028: 1,<br>L0779: 1, L0777: 1,<br>L0779: 1, L0777: 1,<br>L0780: 1, L0777: 1,<br>S0031: 1, H0445: 1 and<br>S0031: 1, H0445: 1 and | L0776: 6, L0766: 5,<br>L0777: 3, L0758: 3,<br>L0755: 2, H0327: 1,<br>L0768: 1, L0805: 1,<br>L0655: 1, L0788: 1,<br>H0648: 1, H0672: 1,<br>S0406: 1, L0747: 1,<br>L0752: 1, L0757: 1 and<br>S0196: 1. | L0471: 11, H0251: 9,<br>L0163: 7, H0599: 5,<br>H0295: 4, H0373: 4,<br>S0210: 4, S0126: 3,<br>S0356: 2, S0358: 2,<br>H0619: 2, H0012: 2,  |
|   |  | Arg-44 to Glu-50, L0163: 7, H0599: 5, Ser-63 to Arg-69, H0295: 4, H0373: 4, Glu-108 to Arg-115, S0210: 4, S0126: 3, Lys-122 to Gly-136, S0356: 2, S0358: 2, Arg-143 to Met-151, H0619: 2, H0012: 2, 2, 2, 2, 2, 2, 3, 2, 3, 3, 4, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, |
| :   | 2628   | 2629   |
|   | 1 - 420  | 637 - 1302   |
|   | 453  | 454  |
|   | 1011966  | 1012005  |
|   | HCRBN71  | HCRNC60  |

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|  |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Asp-167 to Glu-173,H0628: 2, S0364: 2, | Asp-185 to Glu-194, H0551: 2, H0519: 2, | Thr-206 to Asp-213. S0026: 2, H0170: 1, | T0049: 1, S0134: 1, | H0656: 1, H0662: 1, | S0418: 1, S0420: 1, | S0354: 1, S0360: 1, | T0008: 1, H0411: 1, | H0431: 1, H0432: 1, | H0592: 1, S0005: 1, | H0574: 1, H0270: 1, | T0039: 1, H0013: 1, | H0002: 1, H0036: 1, | S0010: 1, S0474: 1, | H0196: 1, T0115: 1, | H0597: 1, H0545: 1, | H0050: 1, H0024: 1, | S0362: 1, H0200: 1, | H0266: 1, S0022: 1, | H0252: 1, H0039: 1, | H0644: 1, H0032: 1, | S0366: 1, H0090: 1, | H0591: 1, T0041: 1, | T0042: 1, H0509: 1, | S0374: 1, H0520: 1, | H0670: 1, H0651: 1, | H0539: 1, S0380: 1, | S0044: 1, S0118: 1, | S0028: 1, L0748: 1, | L0757: 1, L0588: 1, |
| Asp-167 to Glu-17.                     | Asp-185 to Glu-192                      | Thr-206 to Asp-213                      |                     |                     |                     | -                   |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | -                   |                     |                     |                     |                     |                     |
|  |   |   |                     | :                   |                     |                     |                     | •                   |                     |                     | -                   |                     | -                   |                     |                     |                     |                     | :                   |                     |                     | •                   |                     |                     | <del> </del>        |                     | -                   |                     | •                   |                     |
|  |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |
|  |   |   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     | -                   |                     | ٠                   | <u></u>             |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |

|  | 182600,<br>186880,<br>190195,<br>222700,<br>600243,<br>602279,   |   |   |
|--|--|---|---|
|  | 14q11.2  |   | ·   |
| S0011: 1, H0653: 1,<br>H0665: 1, S0242: 1 and<br>H0506: 1. | S0358: 2, S0360: 2, H0251: 2, H0622: 2, S0144: 2, L0659: 2, L0751: 2, L0777: 2, H0265: 1, S0134: 1, H0657: 1, H0667: 1, H0686: 1, H0687: 1, H0648: 1, H0687: 1, L0766: 1, L0549: 1, L0774: 1, L0775: 1, L0778: 1, L0778: 1, L0778: 1, H0683: 1, H0683: 1, H0552: 1, H0555: 1, H0576: 1, L0758: 1, L0749: 1, L0758: 1, L0749: 1, L0758: 1, L0749: 1, L0758: 1, L0758: 1, L0758: | H0659: 2 and L0378:<br>1.                                       | H0529: 7, L0766: 6,<br>L0809: 6, L0777: 5,<br>H0428: 3, H0656: 2,<br>H0013: 2, H0620: 2,<br>L0806: 2, L0665: 2, |
|  | Pro-83 to Gln-90, Ala-123 to Gly-131, H0251: 2, H0652: 2, Glu-174 to Pro-183. S0144: 2, L0659: 2, L0751: 2, L0777: 2, H0265: 1, S0134: 1, H0265: 1, S0134: 1, H0657: 1, H0086: 1, H0687: 1, H0686: 1, H0687: 1, H0687: 1, H0644: 1, H0687: 1, L0776: 1, L0776: 1, L0776: 1, L0776: 1, L0776: 1, L0776: 1, L0776: 1, L0776: 1, L0806: 1, L0657: 1, H0652: 1, H0652: 1, H0652: 1, H0652: 1, H0657: 1, L0776: 1 | Arg-88 to Lys-93,<br>Tyr-101 to Gly-107,<br>Arg-169 to Pro-184. |   |
|  | 2630   | 2631  | 2632  |
|  | 284 - 925  | 3 - 554   | 2 - 169   |
|  | 455  | 456   | 457   |
|  | 1012064  | 1012076   | 1012136   |
| ·  | HSPSJ24  | HPCPB22   | HOVDZ22   |

|                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     | -                   |                        |                       |                       |                      |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        |                       |                       |                      |
| H0547: 2, L0748: 2, | L0747: 2, L0756: 2, | L0601: 2, H0484: 1, | H0192: 1, S0420: 1, | S0358: 1, H0575: 1, | H0581: 1, H0046: 1, | H0012: 1, T0010: 1, | H0266: 1, H0622: 1, | H0165: 1, H0673: 1, | L0456: 1, H0068: 1, | H0135: 1, H0087: 1, | H0264: 1, H0412: 1, | H0560: 1, L0763: 1, | L0770: 1, L0771: 1, | L0649: 1, L0561: 1, | L0375: 1, L0805: 1, | L0776: 1, L0518: 1, | <br>L0663: 1, H0520: 1, | H0519: 1, S0126: 1, | H0659: 1, H0672: 1, | H0539: 1, H0436: 1, | S3014: 1, L0741: 1, | L0749: 1, L0750: 1, | L0779: 1, L0731: 1, | L0589: 1, L0581: 1, | L0608: 1 and S0011: 1. | H0584: 59, S0278: 16, | S0444: 10, L0775: 10, | L0809: 10, H0545: 9, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                         | ·                   |                     |                     |                     |                     |                     |                     |                        | Pro-6 to Gln-11.      |                       |                      |
| ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        | 2633                  |                       |                      |
|                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        | 2 - 721               |                       |                      |
|                     |                     |                     |                     | •                   |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        | 458                   |                       |                      |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     | ,                   |                     |                        | 1012240               |                       |                      |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        | HBZSK53               |                       |                      |

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|                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     | _                   | _                   | _                   |                     |             |                     |                     |                     |                     |                     |                      |             | _                  |
| 6.                  | ۲,                 | 7,                 | 7                  | 9                   | 10656: 5, H0255: 5, | : 5,                | λ,                  | ۶,                  | H0341: 4, H0546: 4, | H0059: 4, L0800: 4, | 4,                   | .3,                 | ε,                  | 33                  | .3,                 | 3,                  | H0522: 3, H0624: 2, | H0657: 2, H0402: 2, | H0637: 2, H0586: 2, | 10486: 2, H0581: 2, | L0770: 2,   | ,0374: 2, L0771: 2, | 4                   | 4                   | .2                  | 4                   |                      | L0601: 2,   | <br>1.             |
| 670                 | 110                | 766                | 757                | 774                 | 255                 | 559                 | 772                 | 747                 | 34                  | 800                 | 758                  | 58(                 | 3                   | 142                 | 653                 | 374                 | 759                 | 5                   | 586                 | 58]                 | 770         | 771                 | 776                 | 052                 | \$                  | 027                 | 777                  | 6           | 77                 |
| HO                  | SS                 | 3                  | 3                  | 3                   | H                   | HO                  | 3                   | Š                   | H                   | 2                   | Š                    | H                   | S                   | 80                  | 3                   | 80                  | H,                  | Ħ                   | Ħ,                  | Ħ                   | 3           | 3                   | 3                   | 8                   | . S                 | SO                  | 3                    | 3           | Ħ,                 |
| 6,                  | ∞.`                | .7,                | 7,                 | 9.                  | 5:5,                | 5,                  | . 5,                | 5,                  | 4.                  | 4.                  | 4,                   | »: 3,               | .33                 | 3.3                 | . 3                 | .υ.                 | 2.3                 | 7:2                 | 7. 2                | 5: 2                | <br>2,      | 7. 2,               | <br>2,              |                     | 4.2                 | .2                  |                      | . 2         | 7: 1               |
| S0144: 9, H0670: 9, | S0408: 8, S0410: 7 | L0761: 7, L0766: 7 | .0731: 7, L0757: 7 | H0617: 6, L0774: 6, | 965                 | S0358: 5, H0559: 5, | H0620: 5, L0772: 5, | S0328: 5, L0747: 5, | 34                  | 055                 | .0754: 4, L.0758: 4, | H0638: 3, H0580: 3, | H0250: 3, S0440: 3, | 10652: 3, S0142: 3, | .0764: 3, L0653: 3, | .0783: 3, S0374: 3, | 52                  | 965                 | 93,                 | 84                  | .0763: 2, ] | 377                 | .0773: 2, L0776: 2, | ,0790: 2, S0052: 2, | H0684: 2, S0406: 2, | S3014: 2, S0027: 2, | .0779: 2, L.0777: 2, | H0445: 2, ] | H0167: 1, H0716: 1 |
| <u>80</u>           | <u>8</u>           | <u> </u>           | <u> </u>           | Ħ                   | Ħ                   | <u>20</u>           | $\Xi$               | <u>8</u>            | 田                   | Ħ                   | <u> </u>             | 耳                   | $\Xi$               | H                   | <u> </u>            | <u> </u>            | 五                   | Ħ                   | Ħ                   | Ħ                   | <u> </u>    | <u> </u>            | <u> </u>            | 3                   | Ħ                   | <u>S</u> 3          | <u> </u>             | Ħ           | Ħ                  |
|                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                     |                      |             |                    |
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|                     | •                  |                    |                    |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                     |                      |             |                    |
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|                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |             |                     | ٠                   |                     |                     |                     |                      |             |                    |
| <del> </del>        |                    |                    |                    |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     | -                   |                     |                     |             |                     |                     |                     |                     |                     |                      |             |                    |
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| <u> </u>            |                    |                    |                    |                     |                     |                     |                     |                     |                     | ·                   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                     |                      |             |                    |
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|                     |                     |                     |                     |   |      | <u>.                                     </u> |                       |   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     | -                      |           |                     |
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|                     |                     |                     |                     |   |      |   |                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                        |           |                     |
|                     |                     |                     |                     |   |      |   |                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        |           |                     |
| S0218: 1, L0785: 1, | S0116: 1, H0254: 1, | H0306: 1, S0442: 1, | S0354: 1, S0045: 1, | H0549: 1. H0587: 1.                     |      | H0318: 1 H0421: 1                             | 110318: 1, 110121: 1, |   | H0083: 1, H0179: 1, | H0628: 1, H0063: 1, | H0100: 1, T0042: 1, | H0560: 1, H0641: 1, | S0344: 1, L0769: 1, | L0646: 1, L0644: 1, | L0768: 1, L0794: 1, | L0806: 1, L0655: 1, | L0383: 1, L0791: 1, | L0663: 1, S0216: 1, | H0699: 1, H0703: 1, | H0593: 1, S0126: 1, | H0690: 1, H0672: 1, | S0190: 1, H0187: 1, | H0576: 1, L0611: 1, | S0028: 1, L0749: 1, | L0750: 1, L0755: 1, | H0343: 1, H0668: 1, | H0653: 1, H0543: 1 and | H0422: 1. | H0032: 3, H0090: 3, |
|                     |                     |                     |                     |   |      |   |                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                        | ٠         | Arg-9 to Asp-14,    |
|                     |                     |                     |                     |   |      |   |                       | • |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2634                |
|                     |                     |                     |                     | *************************************** |      |   |                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ÷                      |           | 3 - 773             |
|                     |                     |                     |                     |   |      |   |                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 459                 |
|                     |                     |                     |                     |   |      |   |                       |   |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                        | ,         | 1012453             |
| -                   |                     |                     |                     |   | <br> |   |                       |   |                     |                     |                     |                     |                     |                     | <b>b</b> ·          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | .,,       | HBCPH02             |

|   | 126650,<br>126650,<br>164860,<br>180105,<br>222800,<br>274600,<br>602081   |  |
|---|--|--|
| :   | 7q31   |  |
| S0114: 2, H0123: 2,<br>H0494: 2, H0445: 2,<br>H0663: 1, H0455: 1,<br>H0036: 1, H0457: 1,<br>H0050: 1, H0039: 1,<br>H0212: 1, H0433: 1,<br>L0766: 1, S0206: 1 and<br>L0749: 1.   | H0521: 181, L0748: 11, H0551: 10, H0617: 8, H0046: 7, L0731: 7, H0623: 6, L0663: 6, H0547: 6, H0265: 5, S0418: 5, H0009: 5, H0556: 4, H0556: 4, H0556: 4, H0266: 4, H0266: 4, H0435: 4, H0689: 4, H0435: 4, H0689: 4, H0435: 4, H0658: 4, S0314: 4, H0658: 4, S0314: 4, H0658: 4, S0314: 4, H0658: 4, S0314: 4, H0658: 4, S0314: 4, H0658: 4, S0314: 4, H0658: 4, S0314: 4, H0658: 4, S0314: 4, H0658: 4, S0314: 3, H0648: 3, S0410: 3, S0132: 3, H0483: 3, S0410: 3, S0132: 3, H0483: 3, S0410: 3, S0132: 3, H0483: 3, S0410: 3, S0132: 3, H0483: 3, S0410: 3, S0132: 3, H0483: 3, S0410: 3, S0132: 3, H0483: 3, S0410: 3, S0132: 3, H0483: 3, S0410: 3, S0132: 3, H0562: 3, H0562: 3, H0562: 3, H0362: 3, H0 | H0012: 3, H0620: 3,<br>H0039: 3, H0488: 3, |
| Leu-38 to Gly-59,<br>Pro-62 to Thr-75,<br>Met-83 to Val-90,<br>Thr-94 to Ser-105,<br>Pro-109 to Glu-125,<br>Phe-134 to Ser-139,<br>Ile-141 to Lys-162,<br>Cys-166 to Pro-180,<br>Leu-202 to Pro-207,<br>Ile-248 to Asn-253. |  |  |
|   | 2635   |  |
|   | 20 - 1306  |  |
|   | 460  | •  |
|   | 1012454  |  |
|   | HCONM62  |  |

|                   |                |                     |                    |                    |                     |                     | -                   |                     |                    |                  |  |                     |                  |                  |                  |                     |                     |                     |                     |                     |                     |                  |                     |                    | -                   |                  |                  |                    |                 |
|-------------------|----------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|--------------------|------------------|--|---------------------|------------------|------------------|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|---------------------|--------------------|---------------------|------------------|------------------|--------------------|-----------------|
|                   |                |                     |                    |                    |                     |                     |                     |                     |                    |                  |  |                     |                  |                  |                  |                     |                     |                     |                     |                     |                     |                  |                     |                    |                     |                  |                  |                    |                 |
| 3.                | · ·            |                     | .3,                | :3,                | 3: 2,               | .2,                 | .2,                 | .2                  | 5: 2,              | 2: 2,            | 4: 2,  | 3: 2,               | 7: 2,            | 2, 2,            | ): 2,<br>        | . 2,                | . 2,                | 2,                  | . 2,                | . 2,                | : 2,                | 8: 2,            | 7: 2,               | : 2,               | . 2,                | 2: 2,            | 4: 1,            | 1,                 | 7: 1,           |
| 0372: 3 1 0764: 3 | 0666 3 H0519 3 | S0027: 3, S0028: 3, | .0439: 3, L0750: 3 | .0777: 3, H0665: 3 | H0656: 2, H0638: 2, | .0562: 2, L0539: 2, | S0360: 2, H0208: 2, | S0045: 2, L0717: 2, | H0549: 2, H0586: 2 | H0156: 2, H0052: | H0545: 2, H0024: 2,                            | H0424: 2, H0213: 2, | H0030: 2, H0087: | H0100: 2, T0042: | H0494: 2, H0560: | H0561: 2, S0440: 2, | .0369: 2, L0640: 2, | .0761: 2, L0646: 2, | ,0659: 2, L0540: 2, | .0382: 2, L0809: 2, | .0664: 2, L0438: 2, | H0593: 2, H0648: | H0555: 2, L0757: 2, | .0758: 2, S0434: 2 | .0595: 2, S0192: 2, | H0423: 2, H0422: | H0677: 2, H0624: | S0342: 1, S0218: 1 | H0650: 1, H0657 |
| 1.03              | 100            | 200                 | 1.04<br>1.04       | L07                | 90H                 | L05                 | S03                 | <u>800</u>          | HOS                | H01              | H05  | HOH                 | )OH              | H01              | H04              | H05                 | 1.03                | L07                 | 90 <u>7</u>         | L03                 | 70 <del>0</del>     | H05              | H05                 | 1.07               | T05                 | H04              | HOE              | 803                | HOC             |
|                   |                |                     |                    | :                  |                     |                     |                     |                     |                    |                  |  |                     |                  |                  |                  |                     | ٠                   |                     |                     |                     |                     |                  |                     |                    |                     |                  |                  |                    |                 |
|                   |                |                     |                    |                    |                     |                     |                     |                     |                    |                  |  |                     |                  |                  |                  |                     |                     |                     |                     |                     |                     |                  |                     |                    |                     |                  |                  | ,                  |                 |
|                   | -              |                     |                    |                    |                     |                     |                     | -                   |                    |                  |  |                     | ,                |                  |                  |                     |                     | <del></del>         |                     |                     |                     |                  |                     |                    |                     |                  |                  |                    |                 |
|                   |                |                     |                    |                    |                     |                     |                     |                     |                    |                  | <u>.                                      </u> |                     |                  | :                | -                |                     |                     |                     |                     |                     |                     |                  | -                   |                    | ·*·                 |                  | <del></del>      |                    |                 |
|                   | -              |                     |                    |                    |                     | ·                   |                     | ·                   |                    |                  | •  |                     |                  |                  |                  |                     |                     |                     |                     |                     |                     |                  |                     | <del>:</del>       |                     |                  |                  |                    |                 |
|                   |                |                     |                    |                    |                     |                     |                     |                     |                    |                  |  |                     |                  |                  | _                |                     |                     |                     |                     |                     |                     |                  |                     |                    |                     |                  |                  |                    |                 |

|                     | _  |                   |                     | _                   |                   |                     |                     | ٠.                  |                     |                     |                   |                     |                     |                     |                     |   |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|----|-------------------|---------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |    | <u>.</u>          |                     |                     |                   |                     |                     |                     |                     |                     | <u>.</u>          |                     |                     |                     |                     |   |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |    |                   |                     |                     |                   |                     |                     |                     |                     |                     |                   |                     |                     |                     | -                   |   |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |
| H0341: 1, S0282: 1, | _  | 662: 1, S0420: 1, | S0356: 1, S0358: 1, | S0444: 1, S0408: 1, | 645: 1, H0261: 1, | 10550: 1, S0222: 1, | 10441: 1, H0370: 1, | H0587: 1, S0005: 1, | H0333: 1, H0331: 1, | F0040: 1, T0082: 1, | 048: 1, S0182: 1, | H0318: 1, H0581: 1, | S0049: 1, H0196: 1, | H0251: 1, H0596: 1, | H0327: 1, H0544: 1, | • | .0471: 1, H0687: 1, | H0286: 1, S0340: 1, | S0003: 1, H0428: 1, | H0033: 1, H0604: 1, | 644: 1, H0628: 1, | H0181: 1, H0606: 1, | L0055: 1, H0169: 1, | .0455: 1, H0124: 1, | S0366: 1, S0036: 1, | H0040: 1, H0063: 1, | H0433: 1, S0038: 1, | .0475: 1, H0132: 1, | H0641: 1, S0144: 1, |
| OH                  | )H | )H                | <u>S0</u>           | S                   | )H                | )H                  | )H                  | H                   | )H                  | TO                  | <u>T0</u>         | H                   | SO                  | H                   | H                   | H | 3                   | H                   | <u>S</u>            | H                   | H                 | H                   | 97                  | <u>3</u>            | <u>80</u>           | H                   | H                   | 3                   | HC                  |
|                     |    |                   |                     | :                   |                   |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |   |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |    |                   |                     |                     |                   |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |   |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |    |                   |                     | :                   |                   |                     |                     |                     |                     |                     |                   |                     |                     | ·                   |                     |   |                     | ٠                   |                     |                     |                   |                     |                     |                     |                     |                     |                     | •                   |                     |
|                     |    |                   |                     |                     |                   |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |   |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |    |                   | · · · -             |                     |                   |                     |                     |                     |                     |                     |                   |                     |                     | •                   |                     |   |                     |                     |                     |                     |                   |                     |                     | ·                   |                     |                     |                     | <u></u>             |                     |
|                     |    |                   |                     |                     |                   |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |   |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |

|   | 121050,<br>126150,<br>159000,<br>175100,<br>175100,  |
|---|--|
|   | 5q22-q23   |
| S0422: 1, S0002: 1,<br>L0598: 1, H0529: 1,<br>L0641: 1, L0374: 1,<br>L0645: 1, L0648: 1,<br>L0650: 1, L0375: 1,<br>L0653: 1, L0776: 1,<br>L0653: 1, L0776: 1,<br>L0657: 1, L0661: 1,<br>L0517: 1, L0518: 1,<br>L0792: 1, H0144: 1,<br>H0701: 1, S0126: 1,<br>H0670: 1, H0539: 1,<br>S0378: 1, H0539: 1,<br>S0378: 1, H0539: 1,<br>S0152: 1, H0631: 1,<br>L0743: 1, L0741: 1,<br>L0779: 1, L0745: 1,<br>L0779: 1, L0752: 1,  | Arg-1 to Ala-11, L0740: 13, L0731: 10, Ser-118 to Gln-126, L0755: 8, L0752: 6, Los-200 to Thr-207, H0551: 5, L0766: 5, Lys-213 to Ala-218, H0672: 5, L0776: 4, Glu-225 to Thr-230. L0757: 4, L0759: 4, H0494: 3, L0775: 3, |
| \$0422: 1<br>\$0598: 1<br>\$10641: 1<br>\$10645: 1<br>\$10650: 1<br>\$10653: 1<br>\$10653: 1<br>\$10653: 1<br>\$10653: 1<br>\$10653: 1<br>\$10653: 1<br>\$10653: 1<br>\$10690: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$10670: 1<br>\$1 | 26, I<br>207, E<br>218, I<br>230. I  |
|   | Arg-1 to Ala-11,<br>Ser-118 to Gln-126,<br>Leu-200 to Thr-207,<br>Lys-213 to Ala-218,<br>Glu-225 to Thr-230.   |
|   | 2636   |
|   | 2 - 691  |
|   | 461  |
|   | 1012459  |
|   | носепе   |

| 175100,             | 175100,             | 175100,             | 179095,             | 192974,            | 192974,            | 601596              |                     |                     |                     |                     |                     |                     | -                   |                     |                  |                  |                     |                         | •                   |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|------------------|---------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| .0529: 3, H0521: 3, | H0318: 2, H0178: 2, | H0553: 2, H0641: 2, | ,0763: 2, L0770: 2, | 0769: 2, L0662: 2, | 0651: 2, L0659: 2, | .0519: 2, L0750: 2, | S0434: 2, H0624: 1, | F0002: 1, H0650: 1, | S0212: 1, H0638: 1, | S0358: 1, S0444: 1, | H0637: 1, S0132: 1, | H0431: 1, H0586: 1, | H0497: 1, H0530: 1, | H0546: 1, H0545: 1, | 55: 1, H0510: 1, | 14: 1, H0598: 1, | H0413: 1, H0560: 1, | <b>88: 1, H0509: 1,</b> | 10633: 1, S0422: 1, | .0371: 1, L0764: 1, | .0765: 1, L0768: 1, | .0650: 1, L0774: 1, | .0806: 1, L0657: 1, | .0809: 1, L0664: 1, | ,0665: 1, H0144: 1, | H0547: 1, H0682: 1, | H0435: 1, H0648: 1, | H0539: 1, S0380: 1, | S0152: 1, H0555: 1, |
| L052                | H031                | H055                | P019                | 9/07               | 1065               | L051                | 8043                | T000                | 8021                | S035                | :90H                | H043                | H049                | 750H                | H0355:           | S0314: 1         | H04.                | S0438: 1                | :90H                | 17037               | 1,076               | 59071               | <u> </u>            | )703 <u>(</u>       | 7000                | H05                 | H04;                | H05:                | S015                |
|                     |                     |                     |                     |                    |                    | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                     |                         |                     |                     |                     | -                   |                     |                     |                     |                     | •                   |                     |                     |
|                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|  |  | <del></del>   |
|--|--|---|
|  | ,  | 106300,<br>108800,<br>120290,   |
| ·  |  | 6p21.3  |
| L0749: 1, L0758: 1,<br>H0445: 1, L0595: 1 and<br>S0192: 1. | L0758: 5, L0769: 4,<br>L0766: 3, L0809: 3,<br>L0774: 2, L0790: 2,<br>L0663: 2, L0439: 2,<br>L0752: 2, S0218: 1,<br>H0583: 1, S0442: 1,<br>S6022: 1, H0441: 1,<br>H0574: 1, H0150: 1,<br>S0388: 1, S0364: 1,<br>L0770: 1, L0369: 1,<br>L0648: 1, L0764: 1,<br>L0648: 1, L0662: 1,<br>L06636: 1, L0662: 1,<br>L0666: 1, L0664: 1,<br>L0666: 1, L0664: 1,<br>L0741: 1, L0743: 1,<br>L0741: 1, L0743: 1,<br>L0759: 1, L0747: 1,<br>L0759: 1, S0434: 1 and<br>L0759: 1, S0434: 1 and<br>L0559: 1, | H0521: 91, H0580: 23,<br>H0522: 22, H0445: 14,<br>H0638: 12, H0656: 11, |
|  | Gln-3 to Cys-12,<br>Thr-19 to Thr-25.  |   |
|  | 2637   | 2638  |
|  | 2 - 829  | 313 - 834   |
|  | 462  | 463   |
|  | 1012469  | 1012482   |
|  | HVVBD93  | нсому86   |

| 120290,             | 120810,             | 120820,             | 142857,             | 142858,             | 150270,             | 167250,             | 170261,             | 177900,             | 179450,             | 201910,             | 217000,             | 222100,             | 233100,             | 235200,             | 248611,             | 256550,             | 256550,             | 600202,             | 600261,             | 601868,             | 602280,             | 602475              |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| H0486: 8, H0090: 7, | H0583: 5, H0125: 5, | S0358: 5, H0581: 5, | H0591: 5, H0561: 5, | H0657: 4, S0442: 4, | H0575: 4, H0634: 4, | H0134: 4, H0427: 3, | H0318: 3, H0050: 3, | H0264: 3, H0648: 3, | H0518: 3, L0599: 3, | H0650: 2, S0376: 2, | S0408: 2, H0586: 2, | H0069: 2, H0635: 2, | H0086: 2, H0252: 2, | H0488: 2, H0560: 2, | H0641: 2, L0776: 2, | H0660: 2, L0748: 2, | L0745: 2, S0434: 2, | H0265: 1, H0556: 1, | S0360: 1, H0676: 1, | H0637: 1, H0619: 1, | H0393: 1, H0440: 1, | H0549: 1, H0431: 1, | H0592: 1, H0574: 1, | H0250: 1, H0004: 1, | H0421: 1, H0242: 1, | H0375: 1, H0109: 1, | T0023: 1, H0031: 1, | H0673: 1, H0376: 1, | H0063: 1, S0440: 1, |
|                     |                     |                     |                     | .′                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|   | 668009  |
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|   | 8q11  |
| H0647: 1, H0646: 1,<br>S0002: 1, S0426: 1,<br>L0768: 1, L0649: 1,<br>L0805: 1, L0659: 1,<br>H0702: 1, H0670: 1,<br>H0684: 1, H0670: 1,<br>H0539: 1, H0709: 1,<br>S0146: 1, H0576: 1,<br>L0744: 1, L0754: 1,<br>L0777: 1, L0752: 1,<br>L0777: 1, L0752: 1,<br>L0755: 1, S0260: 1,<br>S0308: 1, H0707: 1 and<br>H0506: 1. | L0777: 14, L0748: 9,<br>L0747: 7, S0026: 6,<br>S0360: 4, H0519: 4,<br>L0749: 4, L0759: 4,<br>H0077: 4, H0686: 3,<br>H0014: 3, H0686: 3,<br>L0766: 3, L0794: 3,<br>L0766: 3, L0794: 3,<br>L0766: 3, L0754: 3,<br>L0760: 3, L0439: 3,<br>L0750: 3, S0276: 3,<br>H0170: 2, H0171: 2,<br>H0657: 2, H0341: 2,<br>S0212: 2, S0444: 2, |
|   | Met-8 to Lys-13,<br>Pro-23 to Trp-30.   |
|   | 2639  |
|   | 43 - 990  |
|   | 464   |
|   | 1012519   |
|   | HCONJ23   |

|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |  |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     | -                   |                     |
| S0222: 2, H0392: 2, | H0486: 2, H0266: 2, | H0032: 2, L0767: 2, | .0803: 2, L0805: 2, | .0655: 2, L0657: 2, | .0659: 2, L0809: 2, | H0144: 2, S0374: 2, | .0756: 2, L0758: 2, | S0436: 2, L0591: 2, | .0485: 2, H0556: 1, | H0220: 1, H0656: 1, | S0001: 1, H0661: 1, | H0662: 1, S0358: 1, | S0376: 1, S0408: 1, | S0410: 1, H0619: 1, | H0600: 1, H0643: 1, | HO013: 1, H0427: 1, | H0156: 1, H0599: 1, | H0575: 1, S0010: 1, | S0346: 1, H0318: 1, | H0251: 1, L0163: 1, | 30388: 1, S0051: 1,                          | H0271: 1, H0644: 1, | H0111: 1, H0617: 1, | H0673: 1, H0169: 1, | .0456: 1, H0376: 1, | H0598: 1, H0591: 1, | H0040: 1, H0063: 1, | H0413: 1, T0042: 1, | H0560: 1, S0294: 1, |
|                     |                     | <u>.</u>            |                     |                     |                     | <u> </u>            | ·                   | <u> </u>            |                     |                     | <u> </u>            |                     | ×2.                 | <u> </u>            |                     |                     |                     |                     | <u> </u>            |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | ·                   |                     | •                   |                     |                     |                     | -                   |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     | -                   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |  |                     |                     | ·                   |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>;                                    </u> | ···                 |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     | ·<br>·              |                     |                     |                     |                     | •                   |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | ,                   | •                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |

|   |   | 114290,<br>115660,<br>138033,<br>139250,<br>148500,  |
|---|---|--|
|   |   | 17q24-q25  |
| S0450: 1, L0065: 1,<br>S0422: 1, S0002: 1,<br>L0598: 1, H0529: 1,<br>L0770: 1, L0769: 1,<br>L0761: 1, L0646: 1,<br>L0775: 1, L0652: 1,<br>L0775: 1, L0652: 1,<br>L0775: 1, L0652: 1,<br>L0629: 1, L0664: 1,<br>L0663: 1, L0664: 1,<br>S0052: 1, H0691: 1,<br>H0670: 1, H0691: 1,<br>H0670: 1, H0658: 1,<br>L0743: 1, L0751: 1,<br>L0743: 1, L0751: 1,<br>L0743: 1, L0751: 1,<br>S0434: 1, L0608: 1,<br>H0665: 1, S0192: 1,<br>S0194: 1, H0543: 1 and<br>H0423: 1. | H0672: 2  | L0748: 19, L0439: 7,<br>L0731: 6, L0775: 4,<br>S0356: 2, H0421: 2,<br>H0509: 2, L0805: 2,<br>L0783: 2, L0809: 2, |
|   | Lys-2 to Glu-13,<br>Asn-39 to Glu-47,<br>Arg-49 to Glu-56,<br>Lys-73 to Arg-85. |  |
|   | 2640  | 2641   |
|   | 2 - 310   | 3 - 731  |
|   | 465   | 466  |
|   | 1012536   | 1012542  |
|   | HVVBL04   | HVVAF65  |

| 150200,             | 154275,             | 162100,             | 170500,             | 170500,             | 170500,             | 180860,             | 182452,             | 230200,             | 249000,             | 253250,             | 264470              |   | -                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 120220,                       | 120240,              | 123580,             |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|-------------------------------|----------------------|---------------------|
| :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                        |           | 21q22.3                       |                      |                     |
| S0136: 2, L0740: 2, | L0747: 2, L0749: 2, | L0599: 2, L0362: 2, | H0170: 1, S0470: 1, | L0005: 1, S0354: 1, | S0376: 1, S0045: 1, | S0278: 1, H0642: 1, | H0331: 1, H0574: 1, | H0036: 1, S0346: 1, | H0318: 1, L0157: 1, | H0050: 1, L0471: 1, | H0024: 1, H0275: 1, | _ | S0003: 1, H0031: 1, | H0412: 1, T0069: 1, | H0100: 1, T0041: 1, | L0475: 1, S0142: 1, | S0002: 1, L0769: 1, | L0776: 1, L0655: 1, | L0527: 1, L0664: 1, | S0374: 1, L0438: 1, | H0658: 1, H0672: 1, | S0380: 1, S0350: 1, | H0521: 1, S0146: 1, | L0777: 1, L0752: 1, | L0753: 1, L0757: 1 and | L0581: 1. | H0423: 16, H0521: 11, 21q22.3 | L0777: 10, H0622: 9, | L0751: 9, H0641: 8, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Tyr-1 to Ser-12.              |                      |                     |
| ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        |           | 2642                          |                      |                     |
|                     |                     |                     | 11.                 |                     | :                   |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     | ,                      |           | 1 - 1716                      | ,                    |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |   |                     |                     | -                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                        | ,         | 467                           |                      |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1012545                       |                      |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HCONN76                       |                      |                     |

| 151385,             | 171860,             | 190685,             | 236100,             | 236200,             | 240300,             | 267750,             | 600065,             | 601072,             | 601145              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| H0518: 8, L0596: 8. | H0265: 7, H0039: 6, | L0740: 6, H0543: 6, | T0049: 5, L0770: 5, | L0665: 5, L0757: 5, | H0422: 5, H0556: 4, | H0255: 4, H0046: 4, | H0435: 4, L0731: 4, | L0599: 4, H0254: 3, | H0271: 3, H0090: 3, | L0794: 3, L0766: 3, | S0328: 3, H0522: 3, | S0260: 3, H0224: 2, | H0225: 2, H0713: 2, | 80029: 2, 80376: 2, | 80360: 2, 80132: 2, | H0087: 2, H0494: 2, | L0662: 2, L0806: 2, | L0382: 2, L0438: 2, | H0689: 2, H0670: 2, | H0660: 2, L0748: 2, | L0779: 2, S0436: 2, | H0506: 2, T0002: 1, | H0220: 1, H0159: 1, | H0717: 1, S0114: 1, | L0785: 1, H0341: 1, | S0110: 1, H0671: 1, | H0663: 1, H0402: 1, | S0356: 1, S0358: 1, | H0675: 1, H0676: 1, |
|                     |                     |                     |                     | :                   |                     |                     |                     |                     | ·                   | <del></del>         | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     | -<br>-              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
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|                  |                  |                  |             |                  |                  |                  |                  |                    |                      |                    |             |                  |         |                  |                  |               |                    |              |                    |                  |                    | <del></del> - | _                  |                    |                  |                  |               |                   | _                |
|                  |                  |                  |             |                  |                  |                  |                  |                    |                      |                    |             |                  |         |                  |                  |               |                    |              |                    |                  |                    |               |                    |                    |                  |                  |               |                   |                  |
| 22: 1,           | 32: 1,           | 127: 1,          | 10: 1,      | 74: 1,           | 51: 1,           | 63: 1,           | 88: 1,           | 87: 1,             | 23: 1,               | <u>¥</u> .1,       | 517: 1,     | 340: 1,          | 272: 1, | 42: 1,           | 38: 1,           | 46: 1,        | 74: 1,             | 53: 1,       | 55: 1,             | 82: 1,           | 701: 1,            | 584: 1,       | 566: 1,            | 06: 1,             | 139: 1,          | 49: 1,           | L0780: 1,     | 58: 1,            | 45: 1,           |
| S0408: 1, H0722: | H0282: 1, H0632: | H0635: 1, H0427: | 575: 1, S00 | S0346: 1, S0474: | H0581: 1, H0251: | H0544: 1, L0163: | H0051: 1, S0388: | H0188: 1, H0687: 1 | <b>)286: 1, T</b> OC | H0604: 1, H0644: 1 | 0181: 1, HO | H0032: 1, H0040: | H0272:  | HO509: 1, S0142: | .0763: 1, L0638: | .0372: 1, L06 | .0771: 1, L0774: 1 | )805: 1, L06 | L0776: 1, L0655: 1 | .0636: 1, L0782: | L0663: 1, H0701: 1 | 0690: 1, HO   | H0658: 1, H0666: 1 | S0152: 1, S0406: 1 | H0555: 1, L0439: | .0747: 1, L0749: | L0750: 1, L07 | .0755: 1, L.0758: | S0031: 1, H0445: |
| S                | H                | Ħ                | Ħ           | OS.              | H                | H                | 茁                | 茁                  | H                    | Ħ                  | H           | Ħ                | Ħ       | Ħ                | 크                | 3             | <u> </u>           | 걸            | <u> </u>           | <u> </u>         | 걸                  | 茁             | Ħ                  | <u>8</u>           | <u> </u>         | <u> </u>         | <u>그</u>      | ĭ                 | SC               |
|                  |                  |                  | •           |                  |                  |                  |                  |                    |                      |                    |             | •                |         |                  |                  |               |                    |              |                    |                  |                    |               | ٠                  |                    |                  |                  |               |                   |                  |
|                  |                  |                  |             |                  |                  |                  |                  |                    |                      |                    |             |                  |         | -                |                  |               |                    |              | · · ·              |                  |                    |               |                    |                    |                  |                  |               |                   |                  |
| -                |                  |                  |             |                  |                  |                  |                  |                    |                      |                    |             |                  |         |                  |                  |               |                    |              |                    |                  |                    | •             |                    |                    |                  |                  |               |                   |                  |
|                  |                  | <del></del>      | <del></del> |                  |                  |                  |                  |                    |                      |                    |             |                  |         |                  |                  |               |                    |              |                    |                  | -                  |               |                    |                    |                  |                  |               |                   |                  |
|                  |                  |                  |             | •                |                  |                  |                  |                    |                      |                    |             | -                |         |                  |                  | -             |                    |              |                    |                  |                    |               |                    |                    |                  |                  |               |                   |                  |
|                  |                  |                  |             | •                |                  |                  |                  |                    | -                    |                    |             |                  |         | <del></del>      |                  |               | •••                |              |                    | •                |                    |               |                    |                    |                  |                  | <del></del>   |                   |                  |
|                  |                  |                  |             |                  |                  |                  | _                |                    |                      |                    |             |                  |         |                  |                  |               |                    | _            |                    |                  |                    |               |                    |                    |                  |                  |               |                   |                  |

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|------------------------|----------|---------------------|---------------------|---------------------|---------------------|-----------------------|---|---|---|---|---|---|---|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|-------------|---------------------|---------------------|---------------------|
|                        |          |                     |                     |                     |                     |                       |   |   |   |   |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |             |                     |                     |                     |
|                        |          |                     |                     |                     |                     |                       | •                                       |   |   |   |   |   |   | •                                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |             |                     |                     |                     |
|                        |          |                     |                     |                     | _                   |                       |   |   |   |   |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |             |                     |                     |                     |
|                        |          |                     |                     | ,                   |                     |                       |   |   |   |   |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |             |                     |                     |                     |
| S0434: 1, L0604: 1 and |          | L0766: 9, L0777: 9, | H0529: 8, H0521: 7, | .0731: 7, S0360: 6, | .0758: 6, H0494: 5, | 1.0749: 5, 1.0759: 5, | , H0639: 4,                             | , L0665: 4,                             | l, H0520: 4,                            | l, L0439: 4,                            | l, S0424: 4,                            | , L0471: 3,                             | , S0150: 3,                             | , L0803: 3,                             | L0659: 3, L0666: 3, | H0519: 3, H0659: 3, | H0696: 3, L0755: 3, | H0716: 2, H0662: 2, | S0356: 2, S0046: 2, | H0013: 2, H0545: 2, | H0457: 2, H0551: 2, | H0100: 2, L0475: 2, | .0598: 2, L0763: 2, | .0770: 2, L.0637: 2, | .0772: 2, L0765: 2, | , L0649: 2, | .0774: 2, L0775: 2, | .0776: 2, L0809: 2, | H0689: 2, S0406: 2, |
| S0434: 1               | H0542: 1 | T0766:              | H0529: 8            | L0731: 7            |                     | ĺ                     | \$0376: 4                               | S0422: 4                                | ,H0144: 4                               | ,H0547: 4                               | ,H0423: 4                               | , H0581: 3                              | , H0266: 3                              | L0764: 3                                | L0659: 3            | H0519: 3            | H0696: 3            | H0716: 2            | S0356: 2            | H0013: 2            | H0457: 2            | H0100: 2            | L0598: 2            | L0770: 2             | L0772: 2            | L0662: 2, I | L0774: 2            | L0776: 2            | H0689: 2            |
|                        |          | Cys-2 to Ser-16,    | Glu-55 to Lys-61,   | Pro-83 to Leu-88,   | Ser-135 to Pro-148, | Val-152 to Arg-163,   | Pro-223 to Thr-230, S0376: 4, H0639: 4, | Ala-242 to Val-253, S0422: 4, L0665: 4, | Arg-258 to Glu-274, H0144: 4, H0520: 4, | Gly-290 to Asp-300, H0547: 4, L0439: 4, | Lys-337 to Asn-345, H0423: 4, S0424: 4, | Asp-373 to Ala-398, H0581: 3, L0471: 3, | Gly-401 to Lys-406, H0266: 3, S0150: 3, | Gln 410 to Ala 430, L0764: 3, L0803: 3, | Pro-433 to Gln-460. |                     | N                   |                     |                     |                     |                     |                     |                     |                      |                     |             |                     |                     |                     |
|                        |          | 2643                |                     | :                   | ·                   |                       | ٠.                                      |   |   |   |   |   |   |   |                     |                     |                     | 4                   |                     |                     |                     |                     |                     |                      |                     |             |                     |                     |                     |
|                        |          | 3 - 1382            |                     |                     |                     |                       |   |   |   |   |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |             |                     | :                   |                     |
|                        |          | 468                 |                     |                     |                     |                       |   |   |   |   |   |   |   |   |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                      |                     |             |                     |                     |                     |
|                        |          | 1012568             |                     |                     |                     |                       |   |   |   | •                                       |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |             |                     |                     |                     |
|                        |          | HVVAF56             |                     |                     |                     |                       |   |   |   |   |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |             |                     | •                   |                     |

|                    |                 |                  |             |                    |                 |                  |                  |             |                  |                  |          | -                |            |                  |           |            | · · ·            |                  |                  |             | _         |               |                  | ٠                |           |                  | 1         | 7.               |           |
|--------------------|-----------------|------------------|-------------|--------------------|-----------------|------------------|------------------|-------------|------------------|------------------|----------|------------------|------------|------------------|-----------|------------|------------------|------------------|------------------|-------------|-----------|---------------|------------------|------------------|-----------|------------------|-----------|------------------|-----------|
| <u> </u>           |                 |                  |             |                    |                 |                  | •                |             |                  |                  |          |                  |            |                  |           |            |                  |                  | <u></u>          | ٠           |           | <del>-,</del> |                  |                  |           |                  |           |                  | _         |
| ľ                  |                 |                  |             |                    |                 |                  |                  |             |                  |                  |          |                  |            |                  |           |            |                  |                  |                  |             |           |               |                  |                  |           |                  |           |                  |           |
|                    |                 |                  |             | <u> </u>           |                 | •                |                  |             |                  |                  |          |                  |            |                  |           |            |                  |                  | •                |             |           | .,<br>,       | l,<br>_          |                  | 1,        | <br>             |           | 1 <b>,</b>       | 1,        |
| S0028 2            | 1 0747. 2       | L0752: 2         | L0608: 2,   | H0668: 2           | H0624: 1        | S0114: 1         | H0341:           | l, H0484: 1 | H0638:           | S0442: 1         | S0358: 1 | S0007: 1         | , S0300: 1 | S0222: 1         | l, H0497: | , H0485: 1 | H0427:           | H0575: 1         | S0346: 1         | S0182: 1    | ,H0421: 1 | l, H0544:     | H0046:           | H0565:           | , H0012:  | H0188:           | S0003: 1  | H0535:           | H0553:    |
| H0478: 2, S0028: 2 | 0744-2 1.0747-2 | .0750: 2, L0752: | .0757: 2, 1 | .0362: 2, H0668: 2 | 0600: 2, H0624: | H0713: 1, S0114: | H0657: 1, H0341: | 50212: 1,   | H0449: 1, H0638: | S0418: 1, S0442: | 0354: 1, | S0444: 1, S0007: | 30476: 1,  | .0717: 1, S0222: | H0587: 1, | 50414: 1,  | H0486: 1, H0427: | 30280: 1, H0575: | H0036: 1, S0346: |             | S0474: 1, | H0263: 1,     | H0546: 1, H0046: | V0006: 1, H0565: | H0050: 1, | H0594: 1, H0188: | H0687: 1, | H0428: 1, H0535: | H0031: 1, |
|                    |                 | <u> </u>         | <u> </u>    | <u></u>            | <u> </u>        | 正                | 프                | Š           | 五                | <u>S</u>         | Š        | Š                | <u>S</u>   | 듸                | 프         | Š          | <u>=</u>         | <u>S</u>         | 五                | <u> </u>    | <u> s</u> | 프             | <u></u>          | Z                | <u> </u>  | <u> </u>         | 正         | 正                | H         |
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| H0090: 1, H0616: 1, | F0067: 1, T0041: 1, | H0560: 1, H0561: 1, | S0294: 1, S0440: 1, | H0633: 1, H0647: 1, | .0762: 1, L0769: 1, | .0373: 1, L0372: 1, | .0641: 1, L0771: 1, | .0773: 1, L0521: 1, | _0768: 1, L0794: 1, | .0804: 1, L0375: 1, | .0806: 1, L0654: 1, | J0807: 1, L0657: 1, | .0517: 1, L0783: 1, | .0792: 1, L0663: 1, | 30374: 1, L0565: 1, | F0068: 1, H0693: 1, | H0593: 1, S0126: 1, | H0658: 1, H0670: 1, | H0672: 1, S0330: 1, | H0539: 1, S0378: 1, | S0380: 1, H0525: 1, | H0522: 1, H0694: 1, | S0176: 1, H0436: 1, | _0756: 1, L0779: 1, | S0434: 1, S0436: 1, | .0592: 1, L0593: 1, | .0366: 1, S0026: 1, | H0667: 1, H0543: 1, | H0422: 1, L0698: 1, |
|                     | L                   | <u>id</u>           | S                   | <del>, 1</del>      | <del>pool</del> .   | 1                   | <u></u>             | <u>1</u>            |                     |                     | <u> </u>            |                     | 1                   |                     | <u> </u>            |                     | <u> </u>            | <u></u>             |                     | <u> </u>            |                     | <u> </u>            |                     | <b></b>             | <u></u>             |                     | _=                  |                     | 1                   |
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|                                  |                                     | 106100,<br>133780,<br>147050,<br>259770,<br>600045,<br>601884  |
|                                  |                                     | 11q12-q13.1106100,<br>133780,<br>147050,<br>259770,<br>600045,<br>601650,  |
| S0460: 1, H0506: 1 and H0352: 1. | H0615: 2 and H0343:<br>1.           | Arg-41 to Gly-65, H0575: 22, L0599: 19, Pro-88 to Ser-96, H0575: 22, L0599: 19, Thr-104 to Thr-141, H0046: 17, L0659: 17, Glu-209 to Asn-214, L0745: 16, H0510: 15, Arg-263 to Ser-269, L0662: 15, L0665: 15, Lys-290 to Ile-296, L0744: 12, L0754: 12, Lys-320 to Ile-296, L0744: 12, L0754: 12, Lys-320 to Glu-333, H0069: 11, L0751: 11, Val-517 to Ala-522. H0574: 10, L0750: 10, H0031: 9, H0124: 9, L0757: 9, H0150: 8, H0393: 6, H0622: 6, H0599: 6, L0809: 6, S0028: 6, S0044: 6, S0028: 6, S0044: 6, S0028: 6, S0038: 5, H0649: 5, H0059: 5, L0600: 5, H0632: 4, H0090: 4, H0 |
|                                  | Arg-33 to Gly-38, Pro-40 to Lys-52. |  |
|                                  | 2644                                | 2645   |
|                                  | 243 - 749                           | 2 - 1567   |
|                                  | 469                                 | 470  |
|                                  | 1012599                             | 1012600  |
| ·                                | HODEG95                             | HCOOX52  |

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| 4,           | 4                   | 4,                  | .3                  | ຕົ                 | 3,                  | .;<br>;            | .3,                | 3,                  | پ                 | <u>ښ</u>         | .;                 | 3                   | .3    | <u>ن</u>            | .3                  | 2,                  | 3: 2,               | 3:2,                | : 2,                | 2,                  | 6: 2,               | 5: 2,              | ;;<br>;;            | 3,               | 3: 2,               | %<br>2, 2,          | 6: 2,               | 2,                  | <del>1</del> ; 2, |
| 2807         | .0663: 4, H0670: 4, | .0758               | ,0603: 4, H0650: 3, | 10663: 3, H0550: 3 | T0060: 3, S0280: 3, | 10042: 3, S0314: 3 | .0142: 3, H0135: 3 | .0763: 3, L0372: 3, | .0766: 3, L.0775: | .0666: 3, H0144: | H0693: 3, S0126: 3 | 30380               | 30037 | J0759: 3, S0031: 3, | H0445: 3, L0361: 3, | S0011: 3, H0662: 2, | H0619: 2, H0333: 2, | H0486: 2, H0013: 2, | ,0021: 2, H0253: 2, | S0010: 2, H0309: 2, | H0123: 2, H0246: 2, | .0163: 2, H0355: 2 | H0188: 2, S0312: 2, | H0615: 2, H0688: | H0424: 2, H0553: 2, | H0617: 2, L0455: 2, | H0641: 2, H0646: 2, | S0422: 2, L0646: 2, | 0794: 2. L0804:   |
| . <b>4</b> , | : 4, H              | : 4, L              | :4, H               | 3, F               | : 3, S              | 2:3,8              | 3, E               | : 3, L              | 5: 3, L           | 5: 3, F          | 3:3,5              | 2:3,5               | 5:3,5 | 3,8                 | 5: 3, 1             | l: 3, F             | 9:2,1               | 6:2,]               | 1:2,1               | D: 2, I             | 3:2,                | 3: 2, 1            | 8:2,                | 5:2,             | 4.2,                | 7:2,                | 11:2,               | 2: 2, ]             | 4.2               |
|              | .0663               | H0555: 4, L0758: 4, | 0603                | £990F              | 09001               | 10042              | .0142              | 20763               | 79/07             | 79907            | H069               | H0682: 3, S0380: 3, | H043  | L075                | H044                | S001                | H061                | H048                | L002                | S001                | H012                | L016               | H018                | H061             | H042                | H061                | H064                | S042                | 1.079             |
| <u>=</u> L   |                     |                     |                     |                    | :                   | _=                 |                    |                     |                   | <u></u>          | طببت.              | <i></i>             |       |                     | -,                  |                     |                     |                     |                     | -                   |                     |                    |                     |                  |                     |                     |                     |                     |                   |
|              |                     |                     |                     |                    |                     |                    |                    |                     |                   |                  |                    |                     |       |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                  |                     | •                   |                     |                     |                   |
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|              |                     |                     |                     |                    |                     |                    |                    |                     |                   |                  |                    |                     |       |                     |                     | •                   |                     |                     |                     |                     |                     |                    |                     |                  |                     |                     |                     |                     |                   |
| L            | _                   |                     |                     |                    |                     | _                  |                    |                     |                   |                  |                    |                     |       |                     |                     |                     |                     |                     | _                   |                     |                     |                    |                     |                  | _                   |                     |                     |                     |                   |
|              |                     |                     |                     |                    |                     |                    |                    |                     |                   |                  |                    |                     |       |                     |                     | )                   |                     |                     |                     |                     |                     |                    |                     |                  |                     |                     |                     | •                   |                   |
|              |                     | •                   |                     |                    |                     |                    |                    |                     |                   |                  |                    |                     |       |                     |                     |                     |                     |                     |                     | •                   |                     |                    |                     |                  |                     |                     |                     |                     |                   |
| <u> </u>     |                     |                     |                     |                    | _                   |                    |                    |                     | <u>-</u> -        |                  | ٠.                 |                     |       |                     |                     |                     | _                   |                     |                     |                     |                     |                    | _                   |                  |                     |                     |                     |                     |                   |

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|---------------------|-----------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|
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| L0774: 2, L0375: 2, | 0805.2 1 0776.2 | 0655: 2, L0559: 2, | .0664: 2, L0565: 2, | 10684: 2, S3014: 2, | .0743: 2, L0439: 2, | .0746: 2, L0756: 2, | .0605: 2, L0604: 2, | .0593: 2, S0196: 2, | H0624: 1, H0220: 1, | H0222: 1, L0393: 1, | 10657: 1, H0656: 1, | H0381: 1, H0341: 1, | S0298: 1, S0282: 1, | 10254: 1, H0255: 1, | 10661: 1, H0638: 1, | S0007: 1, S0300: 1, | H0411: 1, S0278: 1, | S6022: 1, H0441: 1, | H0431: 1, H0357: 1, | H0586: 1, H0587: 1, | H0497: 1, H0635: 1, | .0022: 1, H0318: 1, | S0474: 1, H0581: 1, | 9: 1, H0052: 1, | H0205: 1, H0545: 1, | H0457: 1, H0086: 1, | HO081: 1, H0050: 1, | H0012: 1, H0024: 1, | H0015: 1, H0051: 1, |
| 7L071               | 1 080           | 10655              | F066                | 7890H               | L0743               | 1074                | 1090T               | 10593               | H062                | H022;               | H065                | H038                | S0298               | H025                | 990H                | 2000                | H041                | S6022               | H043                | H058                | H049                | L002                | S0474               | S0049           | H020                | H045                | H008                | H001;               | H001                |
|                     |                 |                    |                     | · .                 |                     |                     |                     |                     |                     |                     | <del></del> ,       | •                   |                     |                     |                     | ·<br>               |                     |                     |                     |                     |                     |                     |                     | -               |                     |                     |                     |                     |                     |
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| _                   |                 |                    | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                 |                     |                     | -, ,                |                     |                     |
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|              |                  |             |                  |              |                  |             |             |                  |              |             |              |                 |              |              |              |              |           |             |                  |                  |               |           |                  |                  |              |                  |              | <u>.</u>         |                  |
| S0318: 1,    | 250: 1,          | , L0483: 1, | 364: 1,          | l, H0598: 1, | 0087: 1,         | , H0488: 1, | , H0334: 1, | 0652: 1,         | l, L0762: 1, | )631: 1,    | L0637: 1,    | 645: 1,         | L0771: 1,    | L0649: 1,    | , L0653: 1,  | 384: 1,      | L0791: 1, | , H0520: 1, | 0689: 1,         | 0672: 1,         | S0330: 1,     | L0602: 1, | 0187: 1,         | 3012: 1,         | 741: 1,      | 3740: 1,         | L0731: 1,    | 0362: 1,         | 0543: 1,         |
| S6028: 1, SC | S0316: 1, S0250: | H0328: 1, L | 70006: 1, S0364: | S0366: 1, H( | H0616: 1, H0087: | H0264: 1, H | F0004: 1, H | 10625: 1, H0652: | S0002: 1, L( | .0640: 1, L | .0769: 1, L( | 0667: 1, L0645: | .0764: 1, LO | .0773: 1, LO | .0651: 1, LO | .0658: 1, LA |           | 30428: 1, H | H0593: 1, H0689: | H0659: 1, H0672: | \$0328: 1, SC | •         | H0518: 1, H0187: | S0118: 1, S3012: | 30390: 1, L( | .0742: 1, L0740: | .0752: 1, LU | H0595: 1, L0362: | H0668: 1, H0543: |
| Š            | <u>S</u>         | <u> </u>    | Ē                | <u> </u>     | 프                | <u>#</u>    |             | <u>æ</u>         | <u>S</u>     | _لــر       | <u> </u>     | <u></u>         | <u></u>      | 户            | <u> </u>     | <u>_</u>     | 브         | S           | <u> </u>         | <u> </u>         | S             | S         | <u> </u>         | S                | <u>:</u>     | <u></u>          |              | <u>æ</u> :       | Ħ                |
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|                     |                        |                       | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                        |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0422: 1, S0042: 1, | H0008: 1 and H0352: 1. | L0439: 13, L0748: 11, | L0601: 8, L0747: 7, | L0750: 7, L0438: 5, | L0757: 5, L0770: 4, | L0769: 4, L0764: 4, | L0766: 4, L0731: 4, | .0803: 3, L0775: 3, | .0666: 3, H0521: 3, | .0751: 3, L0758: 3, | S0418: 2, H0550: 2, | H0013: 2, H0052: 2, | H0622: 2, H0494: 2, | .0646: 2, L0771: 2, | .0774: 2, L0663: 2, | J0565: 2, H0593: 2, | H0689: 2, H0672: 2, | S0328: 2, L0752: 2, | JOS87: 2, LO600: 2, | H0556: 1, H0583: 1, | H0656: 1, H0341: 1, | S0001: 1, S0360: 1, | H0549: 1, H0455: 1, | H0586: 1, H0587: 1, | H0156: 1, H0253: 1, | H0318: 1, H0581: 1, | F0110: 1, H0150: 1, | H0019: 1, H0050: 1, | H0620: 1, S0050: 1, |
|                     |                        |                       | Lys-121 to Pro-128, | Ser-183 to Thr-189. |                     |                     |                     |                     |                     |                     | <u></u>             |                     |                     |                     |                     |                     |                     | <u> </u>            |                     | ***                 |                     | <u> </u>            |                     |                     | <u> </u>            | - <u></u>           |                     |                     |                     |
|                     |                        | 2646                  |                     |                     | - <del>-</del>      | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                        | 3 - 1079              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     | •                   |                     |                     |                     | ,                   |                     |                     | 1                   |                     |                     |                     |                     |                     |
|                     |                        | 471                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |
|                     |                        | 1012618               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | -                   |                     |                     |                     |                     |                     |
|                     |                        | HVVBR10               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                   |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     | •                   |                     |                     | ,                   | -                   |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |    |                        | ,  |
|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----|------------------------|--|
|                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                        | 7q34-qter                                  |
| H0373: 1 H0355: 1 | S6028: 1, H0271: 1, | S0003: 1, H0252: 1, | H0553: 1, H0644: 1, | H0124: 1, S0036: 1, | H0135: 1, H0616: 1, | H0264: 1, H0056: 1, | L0435: 1, S0344: 1, | H0529: 1, L0763: 1, | L0372: 1, L0773: 1, | L0768: 1, L0794: 1, | L0653: 1, L0776: 1, | L0655: 1, L0659: 1, | L0783: 1, L0792: 1, | L0664: 1, L0665: 1, | H0144: 1, S0126: 1, | H0659: 1, H0658: 1, | H0670: 1, S0330: 1, | S3012: 1, S0027: 1, | L0740: 1, L0754: 1, | L0749: 1, L0779: 1, | L0753: 1, L0755: 1, | L0759: 1, L0592: 1, | L0595: 1, H0543: 1, | UNKWN: 1 and H0352: | 1. | H0672: 1 and S3014: 1. | H0036: 1, H0644: 1, H0672: 1 and L0603: 1. |
|                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠.                  |                     |                     |                     |                     |                     | _                   |                     |    | Arg-11 to Arg-20.      |  |
|                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    | 2647                   | 2648                                       |
|                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |    | 44 - 643               | 2 - 745                                    |
|                   |                     |                     |                     |                     |                     |                     |                     | <br>                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |    | 472                    | 473  |
|                   |                     |                     |                     |                     | ٠                   |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    | 1012645                | 1012646                                    |
|                   |                     |                     | •                   | -                   |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    | HVVBK78                | HVVBK73                                    |

|   |  |  |  |                        | _                   |                     |                      |                     |                     |                     |                     |                     |                     |                     |                |                     |                     |                     |                     |                     |                     |                     |                     |
|---|--|--|--|------------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 250100,<br>250800,<br>250800  |  |  |  |                        | 107250,             | 134820,             | 134820,              | 134820,             | 134830,             | 134850,             | 134850,             | 147680,             | 181600,             | 189800,             | 266300,        | 600919              |                     |                     |                     |                     |                     |                     |                     |
| 22q13.31  |  | ·  |  |                        | 4q27-q28            |                     |                      |                     |                     |                     |                     |                     |                     |                     |                |                     |                     |                     | ,                   |                     |                     |                     | ÷                   |
| L0766: 10, S0358: 4,<br>H0318: 3, L0809: 3,<br>S0360: 2, H0617: 2,<br>H0264: 2, L0769: 2, | L0775: 2, H0670: 2,<br>H0462: 1, H0646: 1, | L0761: 1, L0764: 1,<br>L0771: 1, L0773: 1, | L0805: 1, L0787: 1,<br>S0374: 1 H0684: 1 | L0779: 1 and L0758: 1. | L0803: 4, L0745: 4, | L0758: 4, H0672: 3, | \$0007: 2, H0090: 2, | L0769: 2, L0804: 2, | L0774: 2, L0809: 2, | L0439: 2, L0749: 2, | L0731: 2, L0599: 2, | L0362: 2, S0418: 1, | S0360: 1, S0046: 1, | H0431: 1, H0486: 1, | <del>-</del> i | H0042: 1, S0010: 1, | H0052: 1, H0046: 1, | H0024: 1, H0266: 1, | H0687: 1, S0022: 1, | H0553: 1, L0770: 1, | L0794: 1, L0783: 1, | L0529: 1, H0435: 1, | S0152: 1, H0521: 1, |
| 2649 Asp-49 to Asp-59,<br>Asp-110 to Ile-115,<br>Trp-137 to Ser-144.                      |  |  |  |                        | Arg-1 to Gly-12,    | Gly-19 to Trp-25,   | Asp-31 to Gly-39,    | Gly-43 to Glu-52,   | Ala-63 to His-71,   | Asn-141 to Phe-152, | Leu-200 to Leu-208. |                     |                     |                     |                |                     |                     |                     |                     | -                   |                     |                     | •                   |
| 2649  |  |  | · -                                      |                        | 2650                |                     |                      |                     |                     |                     |                     |                     |                     |                     |                | •                   |                     |                     |                     |                     |                     |                     |                     |
| 3 - 527   |  |  |  |                        | 2 - 1117            |                     |                      |                     |                     |                     |                     |                     |                     |                     |                |                     |                     |                     |                     |                     |                     |                     |                     |
| 474   |  |  |  |                        | 475                 |                     |                      |                     | •                   |                     |                     |                     |                     |                     |                |                     |                     |                     |                     |                     |                     |                     | ٠                   |
| 1012652   |  |  |  |                        | 1012654             |                     |                      |                     | ٠                   |                     |                     |                     |                     |                     |                |                     |                     | •                   |                     |                     | •                   |                     |                     |
| HCOMW35   |  |  |  |                        | HVVBJ28             |                     | •                    |                     |                     |                     |                     |                     |                     |                     |                |                     |                     |                     |                     |                     | •                   |                     |                     |

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|---|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   | 109270,               | 109270,             | 109270,             | 109270,             | 148065,             | 148080,             | 154275,             | 156490,             | 171190,             | 185800,             | 221820,             | 249000,             | 253250,             | 600119,             | 600119,             | 600525,             | 601844              |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 17q21.3               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |
| S0044: 1, H0555: 1,<br>S0260: 1, L0366: 1,<br>H0543: 1 and H0352: 1 | L0747: 15, L0740: 14, | L0731: 9, L0748: 8, | L0776: 7, L0455: 6, | L0769: 6, L0744: 6, | L0756: 6, L0758: 6, | S0328: 5, H0521: 5, | L0752: 5, H0295: 4, | L0717: 4, L0663: 4, | H0672: 4, S0360: 3, | S0046: 3, H0427: 3, | H0599: 3, H0036: 3, | H0687: 3, S0250: 3, | S0022: 3, S0036: 3, | L0770: 3, L0662: 3, | L0774: 3, L0806: 3, | L0783: 3, S0052: 3, | H0144: 3, S0126: 3, | H0660: 3, H0539: 3, | L0742: 3, S0194: 3, | H0556: 2, T0049: 2, | H0662: 2, S0045: 2, | H0619: 2, L0622: 2, | H0013: 2, H0318: 2, | S0049: 2, H0356: 2, | H0553: 2, S0364: 2, | S0366: 2, H0551: 2, |
|   | Arg-23 to Thr-28,     | Pro-115 to Thr-122. |                     |                     |                     |                     |                     | -                   |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 2651                  |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 102 - 1742            | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠,                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 476                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 1012657               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |
|   | HVVBR45               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                     |                    |                     |                     |                    | <u> </u>            |                      |                      |                    |                    |                     |                     |                     |                     |                     |                     |                     |   |                     | ,                   | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|--------------------|---------------------|---------------------|--------------------|---------------------|----------------------|----------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                    |                     |                     |                    |                     |                      | _                    |                    |                    | •                   | -                   |                     |                     | •                   |                     | · · · · ·           |   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| .0625: 2, L0764: 2, | 0771: 2, L0648: 2, | .0768: 2, L0775: 2, | ,0659: 2, L0666: 2, | 0664: 2, L0438: 2, | S0350: 2, L0611: 2, | .0743: 2, L.0751: 2, | .0754: 2, L.0749: 2, | 0755: 2, L0757: 2, | 0485: 2, L0595: 2, | ,0603: 2, S0011: 2, | 40506: 2, H0171: 1, | 10265: 1, H0686: 1, | S6024: 1, S0114: 1, | S0430: 1, H0657: 1, | .0785: 1, S0116: 1, | S0212: 1, S0418: 1, |   | S0376: 1, H0675: 1, | H0208: 1, S0132: 1, | H0393: 1, S0300: 1, | S6022: 1, H0261: 1, | H0549: 1, S0222: 1, | H0431: 1, H0391: 1, | H0586: 1, H0333: 1, | H0642: 1, H0643: 1, | .0623: 1, H0485: 1, | H0486: 1, H0122: 1, | 80010: 1, 80346: 1, | 70048: 1, H0196: 1, |
|                     |                    | 7                   |                     | <u> </u>           | S                   |                      |                      |                    |                    | <u> </u>            | <b>Ξ</b>            | H                   | S                   | S                   | <u> </u>            |                     | S | <u>s</u>            | <u> </u>            | <u></u>             | S                   | <u> </u>            | <u></u>             | <u> </u>            | <u> </u>            | <u>,</u>            | <u>田</u>            | S                   |                     |
|                     |                    |                     |                     |                    | •                   |                      |                      |                    |                    |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |
|                     |                    |                     |                     | <u> </u>           | -                   |                      |                      | -                  |                    |                     |                     |                     | <u></u>             | -                   | _                   | _                   |   |                     |                     | -                   | •                   | -                   |                     |                     |                     |                     |                     |                     |                     |
|                     |                    |                     |                     |                    |                     |                      |                      |                    |                    |                     | -                   |                     | -                   |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -14                 |                     |

|                     |                     |                     |                     |                     |                     |                     |                     |                     | 1.                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0545: 1, H0046: 1, | H0009: 1, L0157: 1, | H0023: 1, H0024: 1, | H0083: 1, H0239: 1, | H0510: 1, H0594: 1, | S6028: 1, H0266: 1, | H0615: 1, H0428: 1, | H0039: 1, H0622: 1, | H0424: 1, H0617: 1, | H0090: 1, H0038: 1, | H0040: 1, H0087: 1, | F0067: 1, T0042: 1, | H0494: 1, H0561: 1, | S0450: 1, H0641: 1, | S0344: 1, S0002: 1, | L0369: 1, L0762: 1, | L0763: 1, L0638: 1, | L0637: 1, L0372: 1, | L0767: 1, L0651: 1, | L0653: 1, L0661: 1, | L0515: 1, L0383: 1, | L0382: 1, L0809: 1, | L0367: 1, L0665: 1, | S0374: 1, H0519: 1, | H0683: 1, H0659: 1, | H0651: 1, S0330: 1, | S0380: 1, S0027: 1, | S0206: 1, L0745: 1, | .0750: 1, L0759: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | · .                 |                     |                     |                     |                     | [                   |                     |                     |                     |                     |                     |                     | -4                  |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |

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|--|-----------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  | 107680,               | 107680,<br>107680,                          | 107680,             | 107680,             | 107720,             | 133780,             | 147791,             | 159555,             | 168000,             | 186740,             | 186830,             | 188025,                                 | 203750,             | 261640,             | 600048,             | 601382,             | 602574,             | 602574              |                     |                     |                     |                     |                     |                     |
|  | 11q23                 |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     | -                   |                     | -                   |                     |                     |                     |
| S0260: 1, H0595: 1,<br>L0591: 1, L0601: 1,<br>L0366: 1, H0665: 1,<br>H0667: 1, S0458: 1,<br>S0446: 1 and H0352: 1. | L0740: 15, L0748: 14, | L0752: 10, H0494: 9,<br>L0745: 9, H0013: 7. | L0774: 7, L0754: 7, | S0358: 6, S0444: 6, | L0771: 6, S0374: 6, | LQ471: 5, H0032: 5, | L0646: 5, L0655: 5, | H0580: 4, H0574: 4, | H0014: 4, H0373: 4, | S0003: 4, H0529: 4, | L0770: 4, L0766: 4, | L0659: 4, L0665: 4,                     | H0624: 3, S0376: 3, | S0360: 3, S0408: 3, | H0592: 3, H0039: 3, | H0090: 3, T0042: 3, | L0773: 3, L0662: 3, | L0775: 3, L0663: 3, | L0581: 3, H0423: 3, | H0156: 2, H0599: 2, | H0575: 2, H0590: 2, | H0318: 2, H0581: 2, | H0457: 2, H0123: 2, | H0356: 2, H0553: 2, |
|  | Pro-58 to Ser-64.     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| :  | 2652                  |   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |   |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |
|  | 29 - 520              |   | ٠                   |                     |                     | •                   |                     |                     |                     |                     |                     | *************************************** |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     | ,                   |                     |
|  | 477                   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 1012665               | -   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | HVVAF41               |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|--------------------|----------|
|   |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                      |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                    |          |
| L |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                  |                  | ·                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                    |          |
|   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                  |                  |                  |                  |                  | -                |                  |                  |                  |                  |                  | •                |                  |           |                    |          |
|   |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                      |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                    |          |
|   | ~î                  |                     |                     | •                   | -                   | - 5                 | •                   | ~ົ້                 | -Si                 |                     | •                   |                     |                      |                     | •                | •                |                  |                  | _                |                  |                  |                  | •                |                  | ·                |                  |                  |           |                    |          |
|   | H0591: 2, H0264: 2, | S0438: 2, S0150: 2, | S0144: 2, S0002: 2, | S0426: 2, L0803: 2, | .0657: 2, L0666: 2, | .0664: 2, H0547: 2, | S0126: 2, H0659: 2, | H0648: 2, H0672: 2, | H0710: 2, H0518: 2, | S0152: 2, H0521: 2, | .0439: 2, L0746: 2, | .0750: 2, L0756: 2, | .0731: 2, L.0758: 2, | S0434: 2, H0136: 2, | 170: 1           | 002: 1           | 218: 1           | 657: 1           | 212: 1           | 329: 1           | 442: 1           | 410:1            | 022: 1           | 586: 1           | 643: 1           | 039: 1           | 427: 1           | T0082: 1  | H0706: 1, H0052: 1 | T0103: 1 |
|   | 2, HC               | 2, S0               | 2, S00              | 2, L0               | 2,10                | 2, H0               | 2, LO               | 2, L0               | 2, LO                | 2, H0               | 2, H0            | 1, T0            | 1, S02           | 1, HC            | 1, S0            | 1, SO            | 1, S0            | 1, SQ            | 1, S6            | 1, HC            | 1, HC            | 1, T0            | 1, H0            | 1, T0     | 1, H0              | 1, T0    |
|   | .0591:              | 0438:               | 0144:               | 0426:               | 0657:               | 0664                | 0126:               | 0648:               | 0710:               | 0152:               | 0439:               | 0750:               | 0731:                | 0434:               | .0600: 2, H0170: | H0171: 1, T0002: | S0134: 1, S0218: | H0650: 1, H0657: | H0341: 1, S0212: | S0282: 1, S0029: | H0125: 1, S0442: | S0354: 1, S0410: | H0619: 1, S6022: | H0391: 1, H0586: | H0497: 1, H0643: | H0486: 1, T0039: | F0040: 1, H0427: | H0098: 1, | 10706:             | H0596: 1 |
| ۲ | Ξ.                  | <u>v</u>            | <u>w</u>            | Š                   | 그                   | <u> </u>            | <u>S</u>            | 王                   | 王                   | Š                   | Ъ                   | <u> </u>            |                      | S                   | <u> </u>         | <u> </u>         | Š                | Œ.               | 正                | S                | 프                | Ś                | 正                | <u> </u>         | 五                | <u> </u>         | F                | <u>II</u> | <u> </u>           | 프        |
|   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                    |          |
| l |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     | •                   |                     |                      |                     | ٠                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                    |          |
| L |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                      |                     |                  | -                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | •                |           |                    |          |
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| l |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                    |          |
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| ŀ |                     | •                   |                     |                     |                     |                     |                     | ٠.                  |                     |                     |                     |                     |                      |                     |                  |                  |                  | -                |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                    |          |
| L |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                      |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                    |          |
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| H0597: 1, L0738: 1, | H0545: 1, H0355: 1, | H0510: 1, H0375: 1, | H0266: 1, H0188: 1, | H0644: 1, L0055: 1, | S0364: 1, H0038: 1, | H0380: 1, H0623: 1, | T0041: 1, L0475: 1, | H0560: 1, H0625: 1, | H0561: 1, S0466: 1, | H0509: 1, H0641: 1, | H0646: 1, H0652: 1, | S0344: 1, S0422: 1, | H0517: 1, L0772: 1, | • | L0388: 1, L0650: 1, | L0651: 1, L0806: 1, | l, | L0661: 1, L0647: 1, | L0787: 1, L0789: 1, | H0520: 1, H0519: 1, | H0689: 1, H0658: 1, | H0670: 1, H0660: 1, | S0328: 1, S0330: 1, | · — | H0522: 1, S0406: 1, | • | H0445: 1, L0596: 1, | L0588: 1, H0653: 1, | H0667: 1, S0192: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   | •                   |                     |    |                     |                     |                     |                     |                     |                     |     |                     |   |                     |                     |                     |
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|   |           | 146200,             | 190300,             | 258900,             | 600882              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                     |                     |                     |                     |
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|   |           | 3q13                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |     |                     |                     | ,                   |                     |
| H0542: 1, H0543: 1,<br>S0424: 1, S0452: 1 and | S0458: 1. | L0439: 7, S0136: 5, | L0438: 4, L0749: 4, | L0777: 4, L0752: 4, | S0010: 3, H0672: 3, | S0116: 2, L0717: 2, | H0013: 2, H0057: 2, | H0068: 2, H0551: 2, | S0002: 2, L0763: 2, | L0662: 2, L0794: 2, | L0766: 2, L0803: 2, | L0805: 2, L0776: 2, | L0547: 2, L0789: 2, | L0666: 2, L0665: 2, | H0670: 2, H0521: 2, | H0555: 2, L0748: 2, | L0751: 2, L0747: 2, | L0731: 2, L0758: 2, | L0759: 2, L0599: 2, | H0170: 1, T0002: 1, | S0040: 1, S0212: 1, | 80358: 1, 80045: 1, | S0046: 1, H0619: 1, | ٠ 🚅 | H0409: 1, H0485: 1, | H0486: 1, H0244: 1, | H0427: 1, L0021: 1, | S0346: 1, H0196: 1, |
|   |           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |     |                     |                     |                     |                     |
|   |           | 2653                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                     | •                   |                     |                     |
|   | -         | 105 - 2138          |                     |                     |                     | •                   |                     | · ·                 |                     |                     |                     |                     | •••                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                     |                     | ,                   |                     |
|   |           | 478                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |     |                     |                     |                     |                     |
|   |           | 1012668             |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     | ,                   |                     |                     | •                   |                     |     |                     |                     |                     |                     |
|   |           | HVVAS32             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                     |                     |                     |                     |

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|  |   |   | 136350,<br>152760,<br>180100,<br>182900,<br>277700,   |
|  |   |   | 8pi1.2  |
| H0052: 1, H0596: 1,<br>H0150: 1, H0562: 1,<br>H0024: 1, H0373: 1,<br>T0010: 1, S6028: 1,<br>H0687: 1, T0023: 1,<br>H0553: 1, H0644: 1, | L0372: 1, L0646: 1,<br>L0800: 1, L0773: 1,<br>L0768: 1, L0659: 1,<br>L0782: 1, L0663: 1,<br>H0144: 1, H0520: 1,<br>H0593: 1, H0659: 1,<br>H0658: 1, S0328: 1,<br>S0044: 1, S0037: 1 | S0028: 1, L0740: 1,<br>L0756: 1, L0779: 1,<br>L0780: 1, H0665: 1,<br>S0192: 1 and S0194: 1. | L0747: 13, L0731: 10,<br>H0144: 8, L0809: 6,<br>L0604: 6, L0769: 5,<br>L0666: 5, L0663: 5,<br>L0740: 5, L0759: 5, |
|  |   |   | Leu-59 to Cys-66,<br>Gln-74 to Leu-82,<br>Asn-107 to Arg-121,<br>Thr-160 to Ser-166,<br>Lys-198 to Ile-203.       |
| · <u>;</u>   |   |   | 2654  |
|  |   |   | 131 - 982   |
|  | <br>  | !   | 479   |
|  |   |   | 1012678   |
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| .0471: 4, L.0659: 4, | .0752: 4, L0755: 4, | .0592: 4, L0763: 3, | .0764: 3, L.0756: 3, | S0026: 3, H0657: 2, | H0013: 2, H0052: 2, | 10687: 2, H0039: 2, | .0455: 2, L0772: 2, | .0766: 2, L0775: 2, | .0805: 2, L0665: 2, | S0126: 2, H0659: 2, | H0521: 2, L0750: 2, | .0779: 2, L0588: 2, | .0605: 2, L0593: 2, | .0362: 2, H0170: 1, | 10171: 1, L0448: 1, | H0686: 1, S0114: 1, | S0134: 1, H0583: 1, | S0212: 1, H0663: 1, | S0420: 1, S0358: 1, | H0580: 1, S0007: 1, | S0046: 1, H0393: 1, | .0717: 1, H0411: 1, | H0261: 1, S0222: 1, | H0632: 1, L0623: 1, | 70039: 1, H0069: 1, | H0427: 1, H0156: 1, | H0597: 1, H0546: 1, | H0373: 1, S0051: 1, | F0010: 1, S0214: 1, |
|                      |                     |                     | П                    | :                   |                     |                     |                     |                     | П                   | <u> </u>            | #4                  |                     |                     | <u>  </u>           |                     | <u> </u>            | <u> </u>            | <u> </u>            | <u> </u>            |                     | <u> </u>            | . •                 |                     |                     |                     |                     | _==                 | <u> </u>            |                     |
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|  | 3cen-q21   |
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| H0031: 1, H0090: 1,<br>H0038: 1, H0063: 1,<br>H0087: 1, H0063: 1,<br>H00413: 1, S0038: 1,<br>T0042: 1, H0494: 1,<br>H0560: 1, H0142: 1,<br>L0520: 1, L0673: 1,<br>L0521: 1, L0662: 1,<br>L0778: 1, L0806: 1,<br>L0778: 1, L0806: 1,<br>L0776: 1, L0806: 1,<br>L0776: 1, L0636: 1,<br>L0657: 1, L0636: 1,<br>H0659: 1, H0684: 1,<br>H0660: 1, H0666: 1,<br>H0672: 1, S0330: 1,<br>H0522: 1, H0576: 1,<br>S3014: 1, L0742: 1,<br>L0758: 1, H0644: 1,<br>L0758: 1, H0667: 1,<br>H0594: 1, H0667: 1,<br>H0594: 1, H0667: 1,<br>H0594: 1, H0667: 1, | L0731: 25, H0696: 17,<br>L0754: 13, S0192: 13,<br>L0809: 12, L0750: 12,<br>L0757: 10, L0519: 9,<br>L0605: 8, L0748: 7, |
|  | His-1 to Asn-13,<br>Ser-31 to Ser-42,<br>Glu-47 to Val-55,<br>Glu-65 to Val-70,<br>Ile-95 to Asp-100,                  |
|  | 2655   |
|  | 43 - 573   |
|  | 480  |
|  | 1012684  |
|  | HVVAQ22  |

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| Lys-107 to Phe-118, H0411: 6, L0517: 6. | to Asn- H0672: 6, L0747: 6, |      | Cys-136 to Lys-142, S0330: 5, L0758: 5, | Met-165 to Glu-177. S0358: 4, H0674: 4, | L0764: 4, L0776: 4, | L0783: 4, L0740: 4, | S0360: 3, H0645: 3, | H0550: 3, H0616: 3, | L0662: 3, L0775: 3, | H0144: 3, H0684: 3, | L0777: 3, L0590: 3, | L0599: 3, S0026: 3, | S0444: 2, H0489: 2, | T0039: 2, H0575: 2, | H0597: 2, H0545: 2, | H0015: 2, H0031: 2, | H0111: 2, H0032: 2, | H0169: 2, H0038: 2, | T0069: 2, S0440: 2, | L0772: 2, L0363: 2, | L0768: 2, L0804: 2, | L0782: 2, L0384: 2, | L0565: 2, S0126: 2, | S0328: 2, S0013: 2, | H0345: 2, L0743: 2, | L0749: 2, L0756: 2, | L0759: 2, S0260: 2, | H0506: 2, H0624: 1, | H0171: 1, S0342: 1, |
| Lvs-107 t                               | Asp-121 to Asn-             | 127, | Cys-1361                                | Met-165 1                               |                     |                     |                     |                     |                     |                     |                     | -                   |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                             |      |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                             |      |   |   |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |                     |                     |

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|           |                  |           | .,               |                  |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  |                  |                  |           |                  |           |
| l,        | •                |           | Ι,               | ı,               |  |                  | ļ,               | ļ,               | l,        | ر.               |        | _•               | 1,        | L,        | 1,        |           | ÷           |          | ÷                | •                |           | •        | •         |                  | T                |                  |           |                  | •         |
| 662:      | 339: 1           | 17: 1     | 265:             | 486:             | 382: 1                                       | 74: 1            | 085:             | 231:             | 123:      | 014: 1           | 375: ] | 214: 1           | 553:      | 163:      | 551:      | 386: ]    | L0774: 1    | L0784: 1 | 553: 1           | <b>.</b> 0559: 1 | 518: 1    | L0788: 1 | 566: 1    | 593:             | 670:             | 80: 1            | 90: 1     | 68: 1            | 79: 1     |
| 1, H0662: | , H03            | l, L0717: | I, HO            | I, HO            | I, T0  | , S04            | 1, HO            | I, HO            | I, H0123: | , H00            | i, H0  | 1, S02           | 1, H0553: | 1, H0163: | 1, H0551: | 1, L0386: | 1,107       | 1, 1.07  | , IQ             | 1, 1.05          | 1, L0518: |          | l, L0666: | l, H0            | 1, HO            | , S03            | 1, S0190: | , S01            | 1, L0779: |
| H0664: 1  | S0408: 1, H0339: | S0300: 1  | H0600: 1, H0592: | H0587: 1, H0486: | H0013: 1, T0082:                             | 30346: 1, S0474: | H0251: 1, H0085: | H0596: 1, H0231: | H0544:    | 70003: 1, H0014: | 163: 1 | H0687: 1, S0214: | H0328: 1  | H0644: 1  | T0090: 1  | 10264: 1  | .0533: 1, I | .0376: 1 | .0378: 1, L0653: | .0654: 1         | .0659: 1  | .0530: 1 | .0791: 1  | .0665: 1, H0693: | H0658: 1, H0670: | S0378: 1, S0380: | S0044: 1  | S0174: 1, S0168: | L0751: 1  |
| ĚΗ        | 80               | S03       | Ř                | <u>e</u>         | ÖH   | SO:              | HO               | )<br>H           | H         | Ĕ                | 2      | Ě                | H         | H         | <u>H</u>  | H         | <u> </u>    | <u>8</u> | 9                | Š                | <u> </u>  | <u>3</u> | <u>3</u>  | <u>3</u>         | H                | 80               | 20        | 80               | <u>e</u>  |
|           |                  |           |                  |                  |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  | ٠                |                  |           |                  |           |
|           |                  |           |                  |                  |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  |                  |                  |           |                  |           |
|           | •                |           |                  |                  |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  |                  |                  |           |                  |           |
| _         |                  |           |                  |                  |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  |                  | ·<br>——          |           |                  |           |
|           | •                |           |                  |                  |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  |                  |                  |           |                  |           |
| _         |                  |           |                  |                  |  |                  |                  |                  |           |                  |        |                  | _         |           |           |           |             |          |                  |                  |           | -        |           |                  |                  |                  |           |                  |           |
|           |                  |           |                  | :                |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  |                  |                  |           |                  |           |
|           | ·                |           |                  | ,                |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          | •         | _                |                  |                  |           |                  |           |
|           |                  |           |                  |                  |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  |                  |                  |           |                  |           |
|           |                  |           |                  |                  |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  |                  |                  |           |                  |           |
|           |                  |           |                  |                  |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  |                  |                  |           |                  |           |
| _         |                  |           |                  |                  | <u>.                                    </u> |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  | -                |           |          |           |                  |                  |                  |           |                  |           |
|           |                  |           |                  |                  |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  |                  |                  |           |                  |           |
|           |                  |           |                  |                  |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  |                  |                  |           |                  |           |
|           |                  |           |                  |                  |  |                  |                  |                  |           |                  |        |                  |           |           |           |           |             |          |                  |                  |           |          |           |                  |                  |                  |           |                  |           |

|                        |           | 133780,             | 266150,             | 276903,             | 276903,             | 276903              |                     | :                   |                     |                     | .,,,                |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     | -                   |
|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                        |           | 11q13.4             | q13.5               |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0780: 1, S0031: 1 and | S0412: 1. | H0457: 7, H0521: 7, | H0150: 5, H0585: 4, | H0255: 3, H0546: 3, | H0617: 3, S0002: 3, | L0659: 3, H0522: 3, | S0434: 3, H0650: 2, | H0254: 2, S0442: 2, | S0376: 2, H0250: 2, | S0003: 2, H0039: 2, | H0553: 2, L0771: 2, | L0662: 2, L0766: 2, | H0689: 2, H0682: 2, | L0751: 2, H0657: 1, | S0116: 1, H0402: 1, | S0418: 1, S0358: 1, | S0360: 1, S0132: 1, | S6026: 1, LQ717: 1, | S0278: 1, H0549: 1, | H0610: 1, H0257: 1, | H0559: 1, H0069: 1, | H0581: 1, H0544: 1, | H0271: 1, H0687: 1, | H0286: 1, S0314: 1, | H0688: 1, T0023: 1, | H0606: 1, H0163: 1, | H0063: 1, H0264: 1, | S0464: 1, S0440: 1, | H0647: 1, S0344: 1, |
|                        |           | Pro-55 to Asp-61,   | Gln-66 to Leu-72.   | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        | ,         | 2656                |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                        |           | 200 - 2128          |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        |           | 481                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        |           | 1012693             |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |
|                        |           | HTAES83             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|   | 102200,<br>106100,<br>131100,<br>131100,<br>133780,<br>147050,<br>163700,<br>164009,<br>168461,<br>168461,<br>168461,<br>168461,   |
|---|--|
|   | 11q13  |
| H0695: 1, L0770: 1,<br>L0638: 1, L0761: 1,<br>L0667: 1, L0642: 1,<br>L0643: 1, L0764: 1,<br>L0651: 1, L0654: 1,<br>L0783: 1, L0788: 1,<br>L0789: 1, L0665: 1,<br>S0052: 1, H0144: 1,<br>H0703: 1, H0690: 1,<br>H0593: 1, H0690: 1,<br>H0593: 1, H0690: 1,<br>H0555: 1, H0436: 1,<br>S0378: 1, S0406: 1,<br>H0555: 1, H0436: 1,<br>H0707: 1, S0011: 1, | H0457: 9, H0695: 8,<br>H0542: 7, H0521: 4,<br>H0436: 4, H0581: 3,<br>H0052: 3, H0135: 3,<br>H0656: 2, S0356: 2,<br>H0659: 2, H0641: 2,<br>H0660: 2, L0741: 2,<br>H0543: 2, H0265: 1,<br>H0543: 1, H0255: 1,<br>H0583: 1, H0255: 1,<br>H0458: 1, S0360: 1,<br>H0438: 1, H0492: 1, |
|   |  |
|   | 2657   |
|   | 1 - 1182   |
|   | 482  |
|   | 1012700  |
|   | HOCMN67  |

| 180840,<br>191181,<br>193235,<br>209901,   | 259700,<br>259770,<br>600045,<br>600319,<br>600528.   | 601884   |  |  |  |
|--|---|--|--|--|--|
|  | ·   |  |  |  |  |
| H0618: 1, H0318: 1,<br>H0544: 1, H0046: 1,<br>H0123: 1, H0081: 1,<br>T0010: 1, H0083: 1, | H0163: 1, S0002: 1,<br>S0052: 1, H0702: 1,<br>H0703: 1, S0374: 1,<br>H0520: 1, H0547: 1,<br>H0690: 1, H0672: 1, | H0539: 1, S0380: 1,<br>S0406: 1, H0576: 1,<br>H0445: 1, S0434: 1,<br>L0601: 1, L0366: 1,<br>H0422: 1 and H0506: 1. | S0418: 2, S0328: 2,<br>H0521: 2, H0733: 1,<br>S0132: 1, H0575: 1,<br>H0024: 1, H0135: 1,<br>H0038: 1, S0038: 1,<br>S0406: 1, L0439: 1 and<br>H0543: 1. | H0688: 2, L0766: 2,<br>H0494: 1, L0652: 1,<br>L0731: 1 and L0759: 1. | L0766: 12, L0758: 8,<br>S0422: 7, L0794: 6,<br>H0622: 5, H0666: 5,<br>L0754: 5, L0592: 5,<br>H0040: 4, L0663: 4, |
|  | H S H H H   | ·<br>·   | Ile-32 to Phe-42.  H So H H H H H H H H H H H H H H H H H  |  | Gin-1 to Asp-24,  Phe-40 to Gin-46.  I.  |
|  |   |  | 2658   | 2659   | 2660   |
|  |   |  | 92 - 619   | 2 - 454  | 1524 - 208   |
|  |   |  | 483  | 484  | 485  |
|  |   |  | 1012711  | 1013085  | 1013213  |
|  |   |  | HAPOW35  | НОУ ЛМ48   | нвлнү84  |

|                     |                     |                     |                    |             |                     | <u> </u>            |                     |                     |                     |                    |                  |                  |                  |                    |             |                  |                  | _                |                  |                  | _                |             |            |          |             |             |          | <u>-</u> |                  |
|---------------------|---------------------|---------------------|--------------------|-------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|------------------|------------------|------------------|--------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------|------------|----------|-------------|-------------|----------|----------|------------------|
|                     |                     |                     |                    |             |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |             |                  |                  |                  |                  |                  |                  |             | •          |          |             |             | •        |          |                  |
|                     |                     |                     |                    |             | •                   |                     |                     |                     | •                   |                    |                  |                  |                  |                    |             |                  |                  |                  |                  |                  |                  |             |            |          |             |             |          |          |                  |
|                     |                     |                     |                    |             |                     |                     | ~·                  |                     |                     |                    |                  |                  |                  |                    |             |                  |                  |                  |                  |                  | · •              |             | _          |          |             |             |          |          |                  |
| .0666: 3            | .0665: 3            | L0756: 3            | .0731: 3           | , S0434: 3, | H0624: 2            | \$0116:2            | H0581: 2            | 10598: 2            | T0690: 2            | H0170: 1           | S0134: 1         | H0656: ]         | 30376: 1         | 0408: 1            | I, H0329: 1 | H0575: ]         | H0046:           | H0063:           | H0625:           | 30472: 1         | L0761: 1         | L0662: 1    | L0364: 1   | L0803: 1 | L0774: 1    | .0784: 1    | 10607: 1 | L0787: 1 | 10519: 1         |
| H0520: 4, L0666: 3, | .0664: 3, L0665: 3, | 10547: 3, L0756: 3, | 0777: 3, L0731: 3, | .0759: 3, 5 | 10423: 3, H0624: 2, | 10583: 2, S0116: 2, | H0318: 2, H0581: 2, | H0428: 2, L0598: 2, | .0655: 2, H0690: 2, | 10518: 2, H0170: 1 | H0686: 1, S0134: | H0657: 1, H0656: | H0483: 1, S0376: | 30360: 1, S0408: 1 | H0580: 1, 1 | H0486: 1, H0575: | H0596: 1, H0046: | H0267: 1, H0063: | H0022: 1, H0625: | S0440: 1, S0472: | 10529: 1, L0761: | .0646: 1, I | 0768: 1, I |          | .0650: 1, I | .0651: 1, I |          |          | .0792: 1, H0519: |
| H                   | <u>3</u>            | H                   | <u>3</u>           | <u> </u>    | <u>H</u>            | H                   | H                   | H                   | <u>3</u>            | H                  | H                | Ħ                | H                | $\frac{8}{2}$      | H           | H                | H                | H                | H                | S<br>S           | Ħ                | <u>김</u>    | <u> </u>   | <u>1</u> | <u> </u>    | <u>3</u>    | <u>1</u> | <u>3</u> | 2                |
|                     |                     |                     |                    |             |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |             |                  |                  |                  |                  |                  |                  |             | •          |          |             |             |          |          |                  |
|                     |                     |                     |                    |             |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |             |                  | •                |                  |                  |                  |                  |             |            |          |             |             |          |          |                  |
|                     |                     |                     |                    |             |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |             |                  |                  |                  |                  |                  |                  |             |            |          |             |             |          |          |                  |
|                     |                     |                     |                    |             |                     |                     |                     |                     |                     | ,                  |                  |                  |                  |                    |             |                  |                  |                  |                  |                  |                  |             |            |          |             | ٠           |          |          |                  |
| ·                   |                     |                     |                    |             |                     |                     |                     |                     |                     |                    | _                |                  |                  |                    |             | •                |                  |                  |                  |                  |                  | •           |            |          |             | •           |          | ,        |                  |
|                     |                     |                     |                    | ·           |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |             |                  |                  | ,                |                  | •                |                  |             |            |          |             |             |          |          |                  |
|                     |                     |                     |                    |             |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |             |                  |                  |                  |                  |                  |                  |             |            | ,        | •           |             |          |          |                  |
|                     |                     |                     |                    |             | •                   |                     |                     | •                   |                     |                    |                  |                  | , , , , ,        |                    |             | •                |                  | <del></del>      |                  |                  |                  | -           | -          |          | ,           |             |          |          |                  |
|                     |                     |                     |                    |             |                     |                     |                     |                     |                     |                    |                  |                  |                  |                    |             |                  |                  |                  |                  |                  |                  |             |            |          |             |             |          |          |                  |

|   | r — — :   |   | ,   |
|---|---|---|---|
|   | ·   |   | 106300,<br>108800,<br>120290,                                     |
|   |   | <b>1</b> 1  | 6p21.3  |
| H0682: 1, H0659: 1,<br>H0658: 1, H0648: 1,<br>S0380: 1, H0521: 1,<br>H0555: 1, H0576: 1,<br>S0392: 1, L0745: 1,<br>L0749: 1, L0779: 1,<br>H0444: 1, L0608: 1,<br>L0362: 1, H0542: 1,<br>L0465: 1, S0424: 1 and<br>S0462: 1. | H0428: 2, S0114: 1,<br>H0656: 1, H0263: 1,<br>H0615: 1, H0684: 1 and<br>L0749: 1. |   | L0740: 4, H0591: 3,<br>H0583: 2, H0013: 2,<br>H0575: 2, H0266: 2, |
|   | Val-10 to Ser-18,<br>Pro-30 to Glu-36,<br>Glu-47 to Gly-54.                       | Arg-31 to Leu-43, Gly-63 to Trp-78, Thr-84 to Pro-89, Asp-120 to Gly-141, Glu-155 to Val-177, Leu-204 to Ser-214, Pro-230 to Lys-236, Lys-300 to Lys-307, Arg-329 to Ile-340, Pro-343 to Ala-368, Glu-375 to Pro-434, Leu-441 to Lys-446, Lys-464 to Glu-495. | Gly-1 to Pro-6,<br>Pro-21 to Ser-44,<br>Pro-51 to Lys-78,         |
|   | 2661  | 2662  | 2663  |
|   | 525 - 701   | 112 - 1629  | 212 - 538   |
|   | 486   | 487   | 488   |
|   | 1013215   | 1013288   | 1013349   |
|   | HODEY05   | HFIAS44   | HHAUD68   |

|                     |                     |                     |                     |                     |                     | <u>.                                    </u> |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |             |                     | <br>                | _                   |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------|---------------------|---------------------|---------------------|
| 120290,             | 120810,             | 120820,             | 142857,             | 142858,             | 150270,             | 167250,                                      | 170261,             | 177900,             | 179450,             | 201910,             | 217000,             | 222100,             | 233100,             | 235200,             | 248611,             | 256550,             | 256550,             | 600202,             | 600261,             | 601868,             | 602280,             | 602475              |                     |                     | <del></del> |                     | 103581,             | 146150,             |
| ļ                   |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>-</u>            |                     |                     |                     |                     |                     |             |                     | 15q13               |                     |
| H0264: 2, L0805: 2, | H0144: 2, S0330: 2, | L0439: 2, H0445: 2, | H0170: 1, H0556: 1, | S0040: 1, S0218: 1, | H0656: 1, H0125: 1, | S0418: 1, S0376: 1,                          | H0587: 1, H0497: 1, | T0039: 1, H0069: 1, | H0635: 1, H0599: 1, | H0590: 1, H0318: 1, | H0052: 1, H0596: 1, | H0050: 1, S0003: 1, | H0622: 1, H0090: 1, | H0038: 1, H0634: 1, | H0616: 1, H0551: 1, | H0488: 1, S0016: 1, | H0561: 1, S0002: 1, | L0654: 1, L0518: 1, | S0374: 1, S0126: 1, | H0659: 1, H0660: 1, | H0672: 1, H0651: 1, | H0539: 1, H0521: 1, | H0555: 1, L0750: 1, | L0756: 1, L0757: 1, |             | L0592: 1, S0026: 1, | L0748: 6, S0422: 4, | H0658: 4, L0717: 3, |
| Asp-80 to Ser-95,   | Leu-97 to Glu-103.  |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |             |                     | Trp-4 to Ser-11,    | Asn-17 to Arg-23.   |
|                     |                     |                     |                     | ,                   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |             |                     | 2664                |                     |
|                     |                     |                     |                     |                     |                     |  |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |             |                     | 1675                |                     |
|                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |             |                     | <br>489             |                     |
|                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |             |                     | 1013436             |                     |
|                     |                     |                     |                     |                     |                     |  |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |             |                     | HEEAA89             |                     |

| 218000,             | 227220,             | 601623,             | 601800,             | 601889,             | 602117              |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| H0059: 3, L0769: 3, | L0764: 3, H0352: 3, | S0410: 2, H0632: 2, | H0599: 2, H0046: 2, | H0038: 2, H0264: 2, | H0646: 2, S0002: 2, | H0529: 2, L0766: 2, | L0653: 2, L0659: 2, | L0439: 2, L0601: 2, | S0134: 1, H0583: 1, | L0785: 1, S0116: 1, | S0212: 1, H0255: 1, | S0418: 1, S0358: 1, | S0444: 1, H0675: 1, | H0728: 1, H0619: 1, | H0549: 1, H0392: 1, | H0331: 1, T0109: 1, | H0013: 1, H0635: 1, | H0618: 1, S0010: 1, | S0474: 1, H0052: 1, | L0157: 1, H0050: 1, | H0051: 1, H0375: 1, | H0039: 1, H0553: 1, | H0644: 1, L0456: 1, | S0036: 1, H0625: 1, | H0633: 1, L0637: 1, | L0773: 1, L0768: 1, | L0794: 1, L0522: 1, | L0509: 1, L0661: 1, | L0526: 1, L0809: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | -                   |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     | · · · ·             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | · ·                 |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -:-                 |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |

| L0663: 1, E0664: 1,<br>L0665: 1, S0374: 1,<br>L0438: 1, H0547: 1,<br>H0648: 1, S0152: 1,<br>S3014: 1, L0745: 1,<br>L0777: 1, L0777: 1,<br>L0597: 1, L0608: 1,<br>H0543: 1 and S0458: 1. | H0519: 2, S0126: 2, 7<br>H0341: 1, H0125: 1,<br>L0562: 1, S0049: 1,<br>H0123: 1, H0687: 1,<br>H0292: 1, H0284: 1,<br>S0312: 1, S0250: 1,<br>H0622: 1, S0466: 1,<br>L0649: 1, S0037: 1 and<br>H0677: 1. | AR096: 62, AR104: 41, AR089: 24, AR060: 24, AR061: 20, AR033: 16, AR053: 11, AR055: 11, AR039: 6 1044: 5, L0439: 4, L0438: 3, S0278: 2, L0483: 2, H0581: 1, H0046: 1, H0355: 1, H0670: 1, H0521: 1, S0027: 1, L0740: 1 and |
|---|--|--|
| L06<br>L06<br>L04<br>H06<br>S30<br>S30<br>L07<br>L07<br>H05<br>H05  | 2665 Lys-1 to Lys-21. H03 H03 H04 H05 H07 H07 H07 H06 H06 H06 H06 H06  | AR(<br>41, -, -, -, -, -, -, -, -, -, -, -, -, -,  |
|   | 2 - 3175   2665  | 185 - 646 2666   |
|   | 490 2  | 491 185  |
| , , , , , , , , , , , , , , , , , , ,   | 1013524  | 1013687  |
| ·   | HNTAK22  | HOVBX78  |

|           |                      |   |   |   |                     |                     | _                   | ,                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   | <del></del>         |                      |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |
|-----------|----------------------|---|---|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|           |                      |   |   |   |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 19pter-q12           |   | •                                       | ;                                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     | ,                   | ·                   |                     |                     |                     |                     |
| S0260: 1. | L0526: 11, L0622: 8, | H0670: 8, H0087: 7,                     | S0360: 5, H0594: 5,                     | H0188: 5, H0412: 5,                     | S0206: 5, H0218: 4, | S0418: 4, H0318: 4, | H0024: 4, H0617: 4, | L0770: 4, L0783: 4, | S0328: 4, S0027: 4, | H0265: 3, H0663: 3, | T0048: 3, H0597: 3, | H0123: 3, H0673: 3, | S0366: 3, H0135: 3, | H0616: 3, S0002: 3, | L0775: 3, L0776: 3, | L0518: 3, L0663: 3, | H0144: 3, S0374: 3, | S0126: 3, S0380: 3, | \$3014: 3, H0352: 3, | H0624: 2, H0556: 2, | H0219: 2, S0114: 2, | H0657: 2, H0341: 2, | S0110: 2, H0661: 2, | H0305: 2, H0351: 2, | H0492: 2, T0039: 2, | H0052: 2, H0546: 2, | H0178: 2, H0083: 2, | H0688: 2, H0068: 2, | H0038: 2, H0040: 2, |
|           | Ala-16 to His-30,    | Leu-106 to Gly-112, H0670: 8, H0087: 7, | Asp-129 to Pro-137, S0360: 5, H0594: 5, | Thr-144 to Leu-150. H0188: 5, H0412: 5, |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 2667                 |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 1066 - 575           | -                                       |   |   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     | 1                   | _                   |                     |                     |                     |                     |                     |                     |
|           | 492                  |   |   |   |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                      |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 1013740              |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | HVVAW74              |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| Γ |                     |                    |                     |                    | •                |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  | <u>.                                    </u> |           |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|---|---------------------|--------------------|---------------------|--------------------|------------------|------------------|------------------|--------------------|--------------------|--------------------|--------|------------------|------------------|------------------|------------------|-----------|-----------------|------------------|--|-----------|-----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|   |                     |                    |                     |                    |                  |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|   |                     |                    |                     |                    |                  |                  |                  |                    |                    |                    |        |                  |                  |                  |                  | ,         |                 |                  |  |           |           |                  |                  |                  |                  | •                |                  |                  |                  |                  |
|   |                     |                    |                     |                    |                  |                  |                  |                    |                    |                    |        |                  | _                |                  |                  |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|   |                     |                    |                     |                    |                  |                  |                  |                    |                    |                    |        | ,                |                  |                  |                  |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| - |                     | _                  |                     |                    | <u> </u>         |                  |                  |                    |                    |                    |        |                  |                  | <u> </u>         | ·                |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  |                  | $\exists$        |
| 9 | 7:7                 | 9.2                | 8: 2,               | 50: 2,             | 70: 1,           | 4: 1,            | 94: 1,           | 8: 1,              | 50: 1,             | 1:1,               | 55: 1, | 02: 1,           | 6: 1,            | 80: 1,           | 2: 1,            | 49: 1,    | 70: 1,          | 33: 1,           | 23: 1,                                       | 50: 1,    | 10: 1,    | 21: 1,           | 45: 1,           | 86: 1,           | 99: 1,           | 90: 1,           | 31: 1,           | 06: 1,           | 74: 1,           | 63: 1,           |
| 5 | , 2014              | , 1.076            | ,107,               | , 1.07             | , H01            | , H03            | , H02            | , S021             | , L07              | , S00C             | , H02  | , H04            | , S037           | , H05            | , S013           | l, H0549: | , H03           | , H03            | , L06  | , H0250:  | , \$0010: | , H04            | , H05            | , H00            | , H00            | l, H02           | , но             | , H06            | l, H06           | 1, HO            |
| 2 | H0509: 2, S0142: 2, | S0426: 2, L0769: 2 | .0521: 2, L0768: 2, | H0689: 2, L0750: 2 | H0445: 2, H0170: | H0686: 1, H0344: | H0295: 1, H0294: | S0134: 1, S0218: ] | H0650: 1, L0760: 1 | S0116: 1, S0001: 1 | 483: 1 | H0662: 1, H0402: | S0358: 1, S0376: | H0675: 1, H0580: | S0046: 1, S0132: | S0278: 1  | H0441: 1, H0370 | H0455: 1, H0333: | H0643: 1, L0623:                             | 70060: 1, | 70082: 1  | H0505: 1, H0421: | H0327: 1, H0545: | H0150: 1, H0086: | H0012: 1, H0099: | H0109: 1, H0290: | 70023: 1, H0031: | H0181: 1, H0606: | H0166: 1, H0674: | H0124: 1, H0163: |
|   | Ħ<br>H              | S04                | <u>;;</u>           | <u>Ř</u>           | ĎH               | Ř                | H0.              | S0.                | Ĕ                  | <u>S</u> 0         | Ê      | ŬH.              | 80               | 丑                | 20               | 207       | £               | H                | H  | <u>ē</u>  | <u>ğ</u>  | 出                | 丑                | 윤                | 出                | 유                | Ĕ                | 丑                | 요                | 외                |
|   |                     |                    |                     |                    |                  |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|   |                     |                    |                     |                    |                  |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  |  |           |           |                  |                  |                  | -                |                  |                  |                  |                  |                  |
|   |                     |                    |                     |                    | ,                |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| - |                     |                    |                     |                    | :                |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| - |                     |                    |                     |                    |                  |                  | •                |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  | _  |           |           |                  |                  |                  |                  |                  |                  |                  |                  | _                |
|   |                     | •                  |                     |                    |                  |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| L |                     |                    |                     |                    |                  |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  | <del> ,</del>                                |           |           |                  | ٠.               |                  |                  |                  |                  |                  |                  |                  |
|   |                     |                    |                     | •                  | ,                |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  | ,                |                  |
|   |                     |                    |                     |                    |                  |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|   |                     |                    |                     |                    | ٠                |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  |  |           |           |                  | •                |                  |                  |                  |                  |                  |                  |                  |
| - | _                   | _                  |                     |                    |                  |                  |                  |                    | į.                 |                    |        |                  |                  |                  |                  |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|   |                     |                    |                     |                    |                  |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|   |                     |                    |                     |                    |                  |                  |                  |                    |                    |                    |        |                  |                  |                  |                  |           |                 |                  |  |           |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |

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|-----------------|---------------------|---------------------|---------------------|-----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|------------------------|---------------------|---------------------|----------------------|
|                 |                     |                     |                     |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                         |                        |                     |                     |                      |
| H0063-1 H0551-1 | H0413: 1, H0102: 1, | H0560: 1, S0372: 1, | H0130: 1, S0144: 1, |     | L0598: 1, L0507: 1, | L0639: 1, L0648: 1, | L0662: 1, L0767: 1, | L0524: 1, L0805: 1, | L0659: 1, L0542: 1, | L0809: 1, L0530: 1, | L0789: 1, H0691: 1, | H0520: 1, H0519: 1, | H0682: 1, H0684: 1, | H0659: 1, H0658: 1, | H0648: 1, H0672: 1, | S0378: 1, S0152: 1, | S0174: 1, H0576: 1, | L0612: 1, H0540: 1, | L0748: 1, L0740: 1, | S0436: 1, L0485: 1, | L0599: 1, L0608: 1, | L0595: 1, L0362: 1, | <br>H0543: 1, S0446: 1, | L0600: 1 and H0008: 1. | S0358: 6, H0024: 3, | H0696: 3, L0581: 3, | 110123. 2, 101/0. 2, |
|                 |                     |                     |                     | •   |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                         |                        | Ser-4 to Arg-9,     | Ala-97 to Asp-104.  |                      |
|                 |                     |                     |                     | • , |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                        | 2668                |                     |                      |
|                 |                     | <u> </u>            |                     |     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                        | 645 - 205           | •                   |                      |
|                 |                     |                     |                     |     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                         |                        | 493                 |                     |                      |
|                 |                     |                     |                     |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠.                      |                        | 1013853             |                     |                      |
|                 |                     |                     |                     |     |                     | ,                   | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                        | HSPSF84             |                     |                      |

| Γ                   |                     |                     | <del>_ :</del>      | -                   |                     | _                   |                     |                     |                     |  |                     |                     |                     |                     |     |  |                     |                     |                     |                     |                        |                     |                      | _                     |                     |  |   |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|-----|--|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|----------------------|-----------------------|---------------------|--|---|---------------------|---------------------|
| <br>                |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     | . •                 |     | ······································ |                     |                     |                     |                     |                        | 114290,             | 138033,              | 162100,               | 170500,             | 170500,                                | 170500,                                 | 180860,             | 264470              |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |     |  |                     | <del></del>         |                     |                     |                        | 17q25               |                      |                       |                     |  |   | ,                   |                     |
| .0783: 2, H0658: 2, | H0670: 2, H0648: 2, | H0657: 1, S0116: 1, | S0001: 1, H0661: 1, | H0663: 1, H0450: 1, | S6022: 1, H0438: 1, | H0013: 1, S0280: 1, | F0082: 1, H0421: 1, | H0428: 1, T0067: 1, | H0477: 1, S0038: 1, | H0494: 1, L0762: 1,                            | .0371: 1, L0800: 1, | .0644: 1, L0773: 1, | .0648: 1, L0662: 1, | .0775: 1, L0375: 1, |     | .0657: 1, L0666: 1,                    | .0664: 1, H0682: 1, | 10683: 1, S0378: 1, | .0748: 1, L0751: 1, | .0747: 1, L0753: 1, | .0608: 1 and H0543: 1. | L0603: 8, L0754: 6, | .0757: 4, L0758: 4,  | H0619: 3, H0622: 3,   | 30354: 2, S0360: 2, | 10351: 2, H0586: 2,                    | 10544: 2, N0006: 2,                     | S0250: 2, H0030: 2, | H0644: 2, H0617: 2, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | , <u>                                     </u> |                     | . —                 |                     |                     |     |  |                     |                     |                     |                     |                        | Lys-70 to Tyr-79,   | Lys-97 to Asp-102, I | Ser-154 to Ser-160, I | ~                   | Lys-212 to Ser-217, H0351: 2, H0586: 2 | Ala-225 to Glu-230. H0544: 2, N0006: 2, | <u> </u>            |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •  |                     |                     |                     |                     |     |  | -                   | <del>-</del>        |                     |                     |                        | 5669                |                      |                       |                     |  |   | -                   |                     |
| ,                   | ;                   |                     |                     |                     | _                   | **                  |                     |                     |                     |  |                     | ,                   | -                   |                     | ••• |  |                     |                     |                     |                     |                        | 3 - 713             |                      |                       |                     |  | -                                       |                     |                     |
|                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |     |  | -                   |                     |                     |                     |                        | 464                 |                      |                       |                     |  |   |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |     |  |                     |                     |                     |                     |                        | 1014003             |                      |                       |                     |  |   |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |     |  |                     |                     |                     |                     |                        | HPAMV95             |                      |                       | ,                   |  |   |                     |                     |

|                     |                     |                     |                     |                     |   |                     | -                   |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |           |                  |                   |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------|------------------|-------------------|---------------------|
|                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |           |                  |                   |                     |
| H0032: 2, S0144: 2, | L0803: 2, L0565: 2, | L0438: 2, L0439: 2, | S0418: 1, S0358: 1, | S0278: 1, H0392: 1, | _ | L0021: 1, H0052: 1, | H0546: 1, T0010: 1, | H0271: 1, H0687: 1, | S0214: 1, T0006: 1, | H0031: 1, H0553: 1, | L0142: 1, H0606: 1, | H0087: 1, S0142: 1, | S0208: 1, S0426: 1, | L0761: 1, L0772: 1, | L0800: 1, L0648: 1, | L0662: 1, L0774: 1, | L0653: 1, L0776: 1, | L0782: 1, L0664: 1, | H0519: 1, H0689: 1, | H0690: 1, H0682: 1, | H0658: 1, H0672: 1, | H0555: 1, L0749: 1, | L0756: 1, L0779: 1, | L0755: 1, L0591: 1, | S0196: 1. | H0428: 3         | - 1               | H0123: 2, L0764: 2, |
|                     |                     | ,                   |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |           | Ile-3 to Ser-11, | Arg-24 to Glu-30. |                     |
|                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |           | 2670             |                   | 2671                |
|                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |           | 223 - 312        |                   | 2-571               |
|                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |           | 495              |                   | 496                 |
|                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |           | 1014041          |                   | 1014204             |
|                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <br>      | HOVBX22          |                   | HPDRB63             |

|   |   | 104770,<br>107670,<br>110760,<br>146790,<br>159440,<br>159440,<br>159440,<br>191030,<br>191030,<br>191315,<br>600923,<br>601412,<br>601652, | 602782  |
|---|---|---|---|
|   |   | 1922  | 11925   |
| L0794: 2, L0803: 2,<br>S0356: 1, H0318: 1,<br>H0551: 1, L0662: 1,<br>L0804: 1, H0658: 1,<br>H0539: 1, L0786: 1,<br>H0543: 1 and H0423: 1. | AR061: 5, AR055: 3,<br>AR096: 3, AR089: 2,<br>AR033: 2, AR060: 2,<br>AR104: 2, AR053: 1<br>S0038: 1 and S0053: 1. | H0264: 1 and H0522:   | L0731: 10, L0758: 9,<br>L0592: 8, L0770: 7,<br>L0439: 7, L0754: 7,<br>L0766: 5, L0764: 4, |
|   | Lys-1 to Ser-8,<br>Asn-32 to Asn-41,<br>Gln-48 to Glu-53,<br>Arg-73 to Ser-89.                                    | Met-8 to Lys-13, Met-46 to Lys-52, Leu-89 to Lys-95, Ala-100 to Val-109, Pro-131 to Ser-160, Arg-172 to Thr-178.                            | Ala-15 to Tyr-24,<br>His-32 to Lys-48,<br>Ala-60 to Gly-73,<br>Ser-82 to Phe-88,          |
|   | 2672  | 2673  | 2674  |
|   | 2201 -<br>2467  | 395 - 2434  | 165 - 890   |
|   | 497   | 498   | 499   |
|   | 1014252   | 1014432   | 1014485   |
|   | HNHGJ66   | HDPPN96   | HPCTH41   |

|   |                     |   |                     |                    |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  |                  | _                | -                |                 |
|---|---------------------|---|---------------------|--------------------|---------------------|--------------------|--------------------|----------------------|----------------------|--------------|--------------------|---------------------|--------------------|--------------------|------------------|------------------|------------------|------------------|------------------|-----------|------------------|-----------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------|
|   |                     |   |                     | ,                  |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
|   |                     |   |                     |                    |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
|   |                     |   |                     |                    | _                   |                    |                    |                      | -                    |              |                    |                     |                    |                    | •••              |                  |                  |                  |                  |           |                  |           |                  |                  |                  | ,                |                  |                  |                 |
|   |                     |   |                     | ;                  |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
|   |                     |   |                     |                    |                     |                    |                    |                      |                      | -            | -                  |                     | •                  |                    |                  |                  |                  |                  | <del></del>      |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
| 9.4,                                    | 5: 3,               | 3: 3,                                   | 8: 3,               | 0: 3,              | 0:2,                | 3: 2,              | 8: 2,              | 3: 2,                | 4: 2,                | L0565: 2,    | 0: 2,              | 9: 2,               | 8: 2,              | 36: 1,             | 4: 1,            | 9: 1,            | 5: 1,            | 0: 1,            | 59: 1,           | 7: 1,     | 0: 1,            | 6: 1,     | 2: 1,            | 6: 1,            | 5: 1,            | 1:1,             | 4: 1,            | 13: 1,           | 12: 1,          |
| 1,065                                   | L0745: 4, L0655: 3, | F066                                    | S0052: 3, L0748: 3, | 20747: 3, L0750: 3 | H0170: 2, S0360: 2, | S0046: 2, H0013: 2 | 0771: 2, L0768: 2, | .0794: 2, L.0803: 2, | .0805: 2, L.0664: 2, | L056         | H058: 2, H0710: 2, | .0740: 2, L0749: 2, | .0757: 2, L0608: 2 | H0556: 1, H0686: 1 | H0294: 1, S0114: | S0282: 1, S0029: | H0306: 1, L0005: | 50356: 1, S0300: | H0351: 1, H0369: | 1, H0587: | 70060: 1, H0250: | , H0156:  | S0010: 1, H0052: | H0263: 1, H0596: | .0738: 1, H0545: | H0103: 1, S0051: | S0003: 1, S0214: | H0328: 1, L0143: | H0616: 1, H0412 |
| 62: 4,                                  | 45: 4,              | 66: 3;                                  | 52: 3,              | 47:3,              | 70:2,               | 46: 2,             | 71:2,              | 94: 2,               | 05: 2,               | 10144: 2, I  | 58: 2,             | 40:2,               | 57: 2,             | 56: 1,             | 94: 1,           | 82: 1,           | 06: 1,           | 56: 1,           | 51: 1,           | S0222: 1, | 60: 1,           | H0635: 1, | 10:1,            | 63: 1,           | 38: 1,           | 03: 1,           | 03: 1,           | 28: 1            | 16: 1           |
| 106                                     | , 107,              | <u>1</u>                                | . <u>S</u> 00       | <u>101</u>         | H01                 | 200                | 101                | L07                  | <u>8</u>             | H01          | 90H                | 107                 | 107                | H05                | H02              | S02              | H03              | S03              | H03              | S02       | <u>1</u>         | 90H       | 200              | H02              | 100              | H01              | 800              | H03              | 90H             |
| Phe-105 to Phe-111, L0662: 4, L0659: 4, | Phe-124 to Thr-138, | Glu-211 to Val-217, L0666: 3, L0663: 3, | Val-219 to Gln-224. |                    |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
| to Ph                                   | to Th               | to Va                                   | 10 G                | -                  |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  | ·                |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
| e-105                                   | e-124               | u-211                                   | 1-219               |                    |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  | ,         |                  |           |                  |                  |                  |                  |                  |                  |                 |
| P.                                      | 묘                   | ড                                       | <u>×</u>            |                    |                     |                    |                    |                      |                      | <del>-</del> |                    |                     |                    |                    |                  |                  |                  |                  |                  | <u>-</u>  |                  |           |                  |                  |                  | •                |                  |                  |                 |
|   | :                   |   |                     |                    |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
|   |                     |   |                     |                    |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
|   |                     |   |                     |                    |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
|   |                     |   |                     |                    |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
|   |                     |   |                     |                    |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           | :                |                  |                  |                  |                  |                  |                 |
|   | ٠                   |   |                     |                    | -                   |                    | •                  |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
|   |                     |   |                     |                    |                     | ,                  |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  | _                | _                | _                | _               |
|   |                     |   |                     |                    |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
|   |                     |   |                     |                    |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  | •                |                  |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |
|   |                     |   |                     | ,                  |                     |                    |                    |                      |                      |              |                    |                     |                    |                    |                  |                  |                  |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                 |

|                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 138079,               | 138079,               | 139191,                 | 142959,             | 153880,             | 180104,             | 600994,             |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------------------|-----------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                        | 7p15                  | 1                     |                         |                     |                     |                     |                     |
| L0564: 1, S0440: 1, | UNKWN: 1, L0598: 1, | H0529: 1, L0763: 1, | L0371: 1, L0769: 1, | L0638: 1, L0761: 1, | L0646: 1, L0773: 1, | L0648: 1, L0521: 1, | L0649: 1, L0389: 1, | L0806: 1, L0776: 1, | L0657: 1, L0656: 1, | L0783: 1, L0382: 1, | L0529: 1, L0791: 1, | S0374: 1, L0438: 1, | H0547: 1, H0659: 1, | H0648: 1, S0378: 1, | H0522: 1, H0704: 1, | S0406: 1, H0436: 1, | L0742: 1, L0744: 1, | L0756: 1, L0786: 1, | L0752: 1, H0444: 1, | L0589: 1, L0593: 1, | L0362: 1, H0542: 1, | S0446: 1 and H0352: 1. | L0591: 18, S0027: 14, | H0124: 12, L0596: 11, | , H0040: 10, S3014: 10, |                     |                     | S0132: 7, S0126: 7, |                     |
|                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Cys-5 to Gly-10,      | Ala-22 to Pro-31,     | Lys-107 to Pro-114,     | Ala-149 to Arg-157, | lle-294 to Leu-299, | Ser-356 to Pro-363, | Pro-384 to Phe-392, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2675                  |                       |                         |                     |                     |                     | 2                   |
|                     |                     |                     |                     | ;                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2 - 2299              |                       |                         |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                      | 200                   |                       |                         |                     |                     |                     |                     |
|                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1014646               |                       |                         |                     |                     |                     |                     |
|                     |                     |                     | •                   |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HPCTY73               | -                     |                         |                     |                     |                     |                     |

| 601649   |   |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |
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| Ala-474 to Gly-481, H0543: 6, S0040: 5,<br>Ala-489 to Tvr-494, S0003: 5, S0022: 5. | Pro-512 to Lys-517, S0214: 5, S0144: 5, | Arg-623 to Thr-630, S0037: 5, L0747: 5, | Lys-673 to Ser-678, L0777: 5, L0362: 5, | <br>Arg-714 to Arg-720, H0318: 4, H0266: 4, | Gly-755 to Glu-766. H0560: 4, L0590: 4, | L0599: 4, L0594: 4, | S0011: 4, H0265: 3, | H0657: 3, S0116: 3, | H0663: 3, S0360: 3, | S0045: 3, H0497: 3, | H0559: 3, S0010: 3, | H0052: 3, L0483: 3, | H0090: 3, H0494: 3, | L0766: 3, L0659: 3, | L0666: 3, H0435: 3, | L0602: 3, S3012: 3, | L0740: 3, L0750: 3, | L0731: 3, L0759: 3, | H0542: 3, S0212: 2, | H0431: 2, H0024: 2, | H0014: 2, H0083: 2, | H0428: 2, H0628: 2, | H0617: 2, H0634: 2, | H0551: 2, L0065: 2, | H0509: 2, S0150: 2, | S0210: 2, H0529: 2, | L0770: 2, L0768: 2, |
|  |   |   |   | <br>  |   |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |   |   | -                                       |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | -                   |                     |                     |                     |
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| L0775: 2, L0656: 2, | L0663: 2, H0520: 2, | H0659: 2, H0658: 2, | H0670: 2, S0152: 2, | H0521: 2, S0206: 2, | L0751: 2, L0756: 2, |     | L0485: 2, L0604: 2, | L0595: 2, L0601: 2, | L0603: 2, H0686: 1, | H0583: 1, H0656: 1, | L0785: 1, S0298: 1, | H0402: 1, H0459: 1, | S0418: 1, S0376: 1, | H0580: 1, S0046: 1, | H0393: 1, S0278: 1, | H0437: 1, H0441: 1, | H0370: 1, H0587: 1, | H0486: 1, H0013: 1, | H0427: 1, H0156: 1, | H0575: 1, H0274: 1, | T0048: 1, H0581: 1, | H0421: 1, S0049: 1, | H0251: 1, L0738: 1, | H0123: 1, L0471: 1, | H0051: 1, S0388: 1, |   | T0023: 1, T0006: 1, | H0644: 1, H0674: 1, | L0455: 1, H0598: 1, |
|                     |                     |                     |                     |                     |                     |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |   |                     |                     |                     |
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|                     |                     |                     |                     | ٠.,                 |                     |                     |                     |                     |                     |                     |                     |   | ٠                   |                     |  |                     |                         |                     |                     |                     |                     |                     |   |                     |                     |                     |                        |
| H0135: 1, H0616: 1, | H0063: 1, T0067: 1, | H0264: 1, H0268: 1, | H0269: 1, H0056: 1, | S0038: 1, T0042: 1, | H0625: 1, H0561: 1, | S0382: 1, S0464: 1, | H0633: 1, S0472: 1, | H0649: 1, S0142: 1, | S0422: 1, L0598: 1, | L0369: 1, L0769: 1, | L0772: 1, L0374: 1, |   | L0662: 1, L0363: 1, | L0767: 1, L0388: 1, |  | L0776: 1, L0661: 1, | <br>L0518: 1, L0519: 1, | L0788: 1, S0428: 1, | H0144: 1, H0547: 1, | H0690: 1, H0660: 1, | H0478: 1, H0627: 1, | H0631: 1, S0028: 1, |   | L0758: 1, S0031: 1, | H0445: 1, L0592: 1, | S0194: 1, H0423: 1, | H0422: 1, S0424: 1 and |
|                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |   |                     |                     |  |                     |                         |                     | -                   |                     |                     |                     |   |                     |                     |                     |                        |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     | <u>.                                    </u> |                     |                         |                     |                     |                     | •                   |                     |   |                     |                     |                     |                        |
|                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |   |                     |                     |  |                     |                         | ٠.                  |                     | -                   |                     |                     |   |                     | -                   |                     |                        |
|                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |  | <u>-</u> .          | <br>                    |                     | -                   |                     |                     |                     | • |                     | · <u> </u>          |                     | -                      |
|                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |  |                     |                         |                     |                     |                     |                     |                     |   |                     |                     | •                   |                        |
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|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0008: 1. | S0360: 8, S0356: 6, | L0769: 6, L0598: 4, | L0666: 4, L0750: 4, | L0779: 4, L0758: 4, | H0013: 3, L0803: 3, | L0517: 3, L0809: 3, | S0222: 2, H0592: 2, | L0471: 2, H0169: 2, | L0761: 2, L0764: 2, | L0771: 2, L0776: 2, | L0783: 2, L0664: 2, | H0144: 2, H0670: 2, | S0380: 2, L0748: 2, | L0747: 2, L0777: 2, | S0026: 2, H0624: 1, | H0171: 1, S0040: 1, | S6024: 1, L0002: 1, | H0663: 1, L0005: 1, | S6026: 1, H0351: 1, | H0455: 1, H0600: 1, | T0040: 1, H0244: 1, | S0010: 1, H0052: 1, | L0738: 1, S0316: 1, | H0328: 1, H0615: 1, | H0388: 1, H0135: 1, | T0067: 1, H0059: 1, | H0560: 1, H0647: 1, | L0763: 1, L0646: 1, | L0773: 1, L0662: 1, |
|           | Ser-3 to Gln-34,    | Pro-43 to Ser-48,   | Pro-51 to Tyr-69,   | Asn-87 to Pro-92,   | Pro-107 to Val-119. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·.                  |                     |                     |                     | -                   |                     |
|           | 9292                |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 3 - 380             |                     | ·                   | ,                   |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     | -"                  |                     |                     |                     | ,                   |                     |                     | į                   | ÷                   |
|           | 501                 |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
|           | 1014730             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | <b>НСОРQ33</b>      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |

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| L0794: 1, L0805: 1,<br>L0653: 1, L0659: 1, | L0790: 1, H0682: 1,<br>H0684: 1, H0672: 1, | 80378: 1, 50152: 1, | H0478: 1, S3012: 1, | S0028: 1, L0749: 1, | L0757: 1, S0196: 1, | H0008: 1, H0293: 1 and | H0352: 1. | T0004: 2, L0372: 1, | L0521: 1, L0806: 1, | S0126: 1, H0435: 1 and | L0731: 1. | AR096: 5, AR033: 4, |                   | AR052: 3, AR060: 3, | AR039: 2, AR104: 1, | AR055: 1, AR061: 1 | L0803: 6, L0759: 6, | L0666: 4, L0805: 3, | L0756: 3, L0362: 3, | S0442: 2, L0646: 2, | L0794: 2, L0766: 2, | L0659: 2, H0144: 2, | L0438: 2, H0520: 2, | L0779: 2, L0596: 2, | H0423: 2, L0600: 2, | H0170: 1, S0114: 1, | H0650: 1, S0358: 1, |
|  |  | :                   |                     |                     |                     |                        |           |                     |                     |                        |           | Asp-24 to Val-36,   | Lys-38 to Glu-49, | Pro-80 to Ser-90,   | Thr-131 to Gly-138. |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |  | •                   |                     |                     |                     |                        |           | 2677                |                     |                        |           | 2678                |                   |                     | -                   |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |  |                     |                     |                     |                     |                        |           | 396 - 1061          |                     |                        |           | 3 - 695             |                   |                     |                     |                    |                     | <del></del>         |                     | -                   |                     |                     |                     |                     |                     |                     |                     |
|  |  |                     |                     |                     |                     |                        |           | 502                 |                     |                        |           | 503                 |                   |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |  |                     |                     |                     |                     |                        |           | 1014754             |                     |                        |           | 1014849             |                   |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
|  |  |                     |                     |                     |                     |                        |           | HOEBR36             |                     |                        |           | HLWDZ66             | ,                 |                     | -                   |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|---|---|---|--|--|---------------------|----------------------------------|-----------------------|--|---------------------|---------------------|---------------------|---|---------------------|---------------------|---|----------------------|
|   | :   | · .   |  |  | •                   |                                  | 125264,               | 600511,<br>601556                              |                     |                     |                     |   |                     |                     |   |                      |
|   |   |   |  |  |                     |                                  | 6p23                  |  |                     |                     |                     |   |                     |                     | :                                       |                      |
| S0444: 1, S0360: 1,<br>H0329: 1, S0222: 1,<br>H0497: 1, H0036: 1,<br>S0474: 1, H0051: 1,<br>H0687: 1, S0214: 1. | H0615: 1, H0428: 1,<br>H0622: 1, H0553: 1,<br>H0598: 1, H0040: 1, | H0634: 1, L0060: 1,<br>F0041: 1, S0422: 1,<br>L0773: 1, L0774: 1, | L0657: 1, L0809: 1,<br>L0789: 1, L0664: 1, | S0126: 1, H0689: 1,<br>H0435: 1, H0670: 1. | .0748: 1, L0439: 1, | L0731: 1, S0031: 1 and S0434: 1. | L0439: 13, L0766: 11, | .0747: 11, L.0740: 10,<br>.0752: 9, L.0776: 8, | .0809: 7, L0777: 7, | .0769: 6, L0803: 6, | L0748: 6, L0759: 6, | L0764: 5, H0659: 5,<br>L0755: 5, L0761: 4   | L0806: 4, L0438: 4, | .0749: 4, L0779: 4, | .0758: 4, H0083: 3,                     | .0796: 3, L.0662: 3, |
| <u> </u>  |   |   |  | <u> </u>                                   |                     | <u> </u>                         | Ala-32 to Ala-38,     | Pro-55 to Glu-72, I<br>Ala-83 to Glu-109, I    | <del>년</del> ,      | _                   |                     | Val-173 to Ser-178, 11 vs-185 to Gin-195 11 |                     | _                   | Lys-259 to Lys-264. L0758: 4, H0083: 3, |                      |
|   |   |   |  |  |                     |                                  | 2679                  |  | ,                   |                     |                     |   |                     |                     | •                                       |                      |
|   | ٠   |   |  |  |                     |                                  | 3051 -                | 2260   |                     |                     | -                   |   |                     |                     |   |                      |
|   |   |   |  |  |                     |                                  | 504                   |  |                     |                     |                     |   |                     |                     |   |                      |
|   |   |   |  |  |                     |                                  | 1014869               |  |                     |                     |                     |   |                     |                     |   |                      |
|   |   |   |  |  |                     |                                  | HOEER36               |  |                     | -                   |                     |   |                     |                     |   |                      |

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| L0783: 3, L0663: 3,<br>H0658: 3, L0743: 3 | L0744: 3, L0751: 3, | L0750: 3, L0731: 3, | S0026: 3, S0134: 2, | H0657: 2, S0010: 2, | H0544: 2, S0051: 2, | H0266: 2, S0003: 2, | H0622: 2, L0763: 2, | L0768: 2, L0804: 2, | L0774: 2, L0775: 2, | L0655: 2, L0545: 2, | L0665: 2, H0547: 2, | H0689: 2, S0380: 2, | S3012: 2, S3014: 2, | L0756: 2, H0595: 2, | L0588: 2, L0605: 2, | L0362: 2, L0601: 2, | S0424: 2, H0624: 1, | H0171: 1, H0556: 1, | S0212: 1, H0664: 1, | L0005: 1, S0354: 1, | S0360: 1, S0410: 1, | H0580: 1, S0046: 1, | H0393: 1, H0411: 1, | H0549: 1, H0370: 1, | H0559: 1, H0427: 1, | H0318: 1, S0474: 1, | H0085: 1, T0115: 1, | H0327: 1, H0545: 1, |
|   |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | ••                  | <u>-</u>            | <u>.</u>            |                     |                     |                     | -                   |                     |                     |                     |                     | <del>-</del>        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|-------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                   |                       |                     |                     | ٠                   |                     |                     |                     |                     |                     | ÷                   |                     |                     | ,                   | j,                  |                     |                     |                     | ,                   |                     |                     |                     |                     |                        |           |                     |                     | ·                   |                     |                     |                     |
| H0046: 1 N0006: 1 | 1,10040. 1,100000. 1, | H0123: 1, L0471: 1, | S0388: 1, S0214: 1, | H0252: 1, L0483: 1, | H0553: 1, S0036: 1, | H0591: 1, H0038: 1, | H0040: 1, H0616: 1, | T0067: 1, H0413: 1, | S0386: 1, T0042: 1, | H0560: 1, L0598: 1, | H0529: 1, L0520: 1, | L0762: 1, L0772: 1, | L0646: 1, L0771: 1, | L0794: 1, L0375: 1, | L0805: 1, L0657: 1, | L0367: 1, L0787: 1, | L0666: 1, H0144: 1, | S0126: 1, H0648: 1, | H0672: 1, S0328: 1, | H0521: 1, S0037: 1, | L0754: 1, L0757: 1, | H0444: 1, L0591: 1, | H0667: 1, H0216: 1 and | H0543: 1. | L0803: 4, L0745: 3, | L0804: 2, L0805: 2, | H0672: 2, L0742: 2, | L0752: 2, L0759: 2, | H0583: 1, H0369: 1, | H0550: 1, H0013: 1, |
|                   |                       |                     | -                   | •                   |                     |                     |                     |                     | •                   |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Ser-1 to Tyr-6.     | •                   |                     | -                   |                     |                     |
|                   |                       |                     |                     |                     |                     |                     |                     |                     |                     | •                   | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2680                |                     |                     |                     |                     |                     |
|                   | ٠                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 18 - 170            |                     | -                   |                     | ٠                   |                     |
|                   |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 505                 |                     |                     |                     |                     |                     |
|                   |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                        |           | 1015010             |                     |                     |                     |                     | •                   |
|                   |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     | 1                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HE8OX75             |                     |                     |                     |                     |                     |

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|                     |                     |                     |                     |                     |                     |                     |                        | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | -                   |                     |                     |
| H0156: 1. H0085: 1. | L0351: 1, H0509: 1, | L0769: 1, L0776: 1, | L0657: 1, L0809: 1, | L0666: 1, H0684: 1, | L0439: 1, L0779: 1, | L0777: 1, L0753: 1, | L0757: 1 and H0444: 1. | L0809: 8, L0666: 8, | S0436: 8, H0038: 6, | S0330: 6, S0442: 5, | S0440: 5, L0662: 5, | L0794: 5, L0663: 5, | H0040: 4, L0776: 4, | L0664: 4, L0740: 4, | L0754: 4, L0601: 4, | S0358: 3, S0376: 3, | S0444: 3, L0157: 3, | L0763: 3, L0770: 3, | L0803: 3, L0653: 3, | L0659: 3, L0665: 3, | H0658: 3, H0672: 3, | H0341: 2, H0125: 2, | S0408: 2, H0587: 2, | H0360: 2, H0318: 2, | H0263: 2, H0231: 2, | H0328: 2, H0615: 2, | T0023: 2, H0561: 2, | L0372: 2, L0800: 2, | L0768: 2, L0766: 2, |
|                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | -                   | -                   |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                        | 2681                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                        | 67 - 1365           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | ,                   |                     |                        | 909                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                        | 1015024             |                     |                     |                     |                     |                     |                     |                     |                     | *                   |                     |                     |                     |                     |                     |                     | ÷                   |                     |                     |                     |                     |                     |
|                     |                     |                     | •                   |                     |                     |                     |                        | HVASI06             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| L         |                     | <del>.</del>        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 1 000C. 0 | JOSEF: 4, LUGUO: 4, | S0374: 2, H0547: 2, | H0519: 2, S0126: 2, | H0659: 2, L0745: 2, | .0750: 2, L0752: 2, | S0434: 2, H0506: 2, | H0556: 1, H0556: 1, | S0040: 1, H0717: 1, | H0294: 1, H0583: 1, | H0657: 1, L0785: 1, | H0669: 1, H0671: 1, | 10661: 1, H0663: 1, | 10664: 1, S0420: 1, | .0005: 1, S0356: 1, | S0132: 1, H0619: 1, | H0351: 1, S0222: 1, | S0220: 1, H0431: 1, |          | 70110: 1, L0738: 1, | 10570: 1, H0569: 1, | .0471: 1, H0292: 1, | H0039: 1, H0034: 1, | H0031: 1, H0553: 1, | ,0055: 1, H0166: 1, | H0169: 1, H0674: 1, | H0068: 1, H0598: 1, | S0036: 1, H0163: 1, | H0591: 1, H0359: 1, | S0450: 1, H0647: 1, | H0646: 1, S0344: 1, |
| -         | <u> </u>            | S                   | Ĭ                   | Ĭ                   | <u> </u>            | S                   | Ħ                   | S                   | Ħ                   | Ħ                   | Ħ                   | Ħ                   | Ħ                   | <u> </u>            | <u>S</u>            | Ħ                   | SC                  | Ĕ        | 드                   | Ħ                   | 걸                   | Ħ                   | Ħ                   | 크                   | Ħ                   | Ħ                   | SC                  | H                   | <u>S</u>            | H                   |
|           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
|           |                     |                     | •                   |                     | :                   |                     |                     |                     | ė                   |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
|           |                     |                     |                     |                     | <del></del>         | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,        |                     |                     |                     |                     | <del></del> -       |                     |                     |                     |                     |                     |                     |                     |
| F         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     | <u>.</u> |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |
| _         |                     |                     |                     |                     | ·                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     | •                   |          |                     |                     |                     | <u> </u>            |                     |                     |                     |                     | <del>-</del>        |                     |                     |                     |
| L         |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| _         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |                     |                     |          |                     | _                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
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| I 0638. 1 1 0641. 1 | L0643: 1, L0764: 1, | L0363: 1, L0649: 1, | • | L0376: 1, L0805: 1, | L0527: 1, L0657: 1, | L0512: 1, L0783: 1, | L0382: 1, L0787: 1, | L0532: 1, S0216: 1, | L0438: 1, H0520: 1, | H0593: 1, H0690: 1, | H0682: 1, H0683: 1, | H0435: 1, H0670: 1, | H0660: 1, H0666: 1, | H0648: 1, S0380: 1, | H0518: 1, H0696: 1, | S0044: 1, S0146: 1, | • | S0027: 1, S0028: 1, | L0746: 1, L0749: 1, | L0779: 1, L0777: 1, | L0731: 1, L0758: 1, | S0031: 1, L0599: 1, | L0608: 1, L0595: 1, | H0668: 1, H0665: 1, | S0276: 1, H0423: 1, | S0424: 1, UNKWN: 1, | L0600: 1 and H0008: 1. | L0766: 7, L0769: 4, | L0747: 4, L0758: 4, |
|                     |                     |                     | - | · ·                 |                     |                     | ٠                   |                     |                     | ·-                  |                     |                     |                     |                     | •                   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                        | Lys-1 to Trp-11,    | Asn-13 to Lys-30,   |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2682                |                     |
|                     | ;                   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                        | 3 - 242             |                     |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   | ,                   |                     |                     | _                   |                     |                     |                     |                     |                     |                        | 202                 |                     |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1015059             |                     |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HDPXP07             |                     |

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| H0251: 3, L0805: 3, | S000/: 2, S0414: 2,<br>H0644: 2, H0672: 2, | S0026: 2, H0686: 1, | H0713: 1, H0663: 1, | S0376: 1, S0360: 1, | S0046: 1, L0717: 1, | H0574: 1, H0486: 1, | H0427: 1, H0596: 1, | L0040: 1, L0738: 1, | H0046: 1, H0571: 1, | L0471: 1, S0051: 1, | H0510: 1, S0003: 1, | S0214: 1, H0674: 1, | H0708: 1, H0038: 1, | H0412: 1, H0646: 1, |   | L0662: 1, L0767: 1, | L0794: 1, L0804: 1, | L0806: 1, L0776: 1, | L0606: 1, L0783: 1, | L0792: 1, L0665: 1, | H0660: 1, H0648: 1, | H0521: 1, H0555: 1, | L0743: 1, L0756: 1, | L0777: 1, L0755: 1, | L0759: 1, S0031: 1, | L0362: 1, H0542: 1 and | H0543: 1. | L0777: 11, L0438: 7, |
| Leu-33 to Thr-53.   |  | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                      |
|                     |  | :                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                        |           | 2683                 |
|                     |  |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     | _ |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1-615                |
|                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 508                  |
|                     |  |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1015093              |
|                     |  | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                        |           | HE2KH02              |

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| L0759: 6, L0748: 5, | H0052: 4, L0779: 4, | H0013: 3, L0598: 3, | L0770: 3, H0624: 2, | H0717: 2, S0442: 2, | S0354: 2, L0149: 2, | S0046: 2, S0010: 2, | H0050: 2, H0328: 2, | UNKWN: 2, L0803: 2, | L0776: 2, L0659: 2, | H0670: 2, H0660: 2, | L0439: 2, L0747: 2, | L0749: 2, L0731: 2, | L0594: 2, H0542: 2, | H0170: 1, H0171: 1, | L0785: 1, H0384: 1, | S0358: 1, H0549: 1, | S0222: 1, H0632: 1, | S0414: 1, S0474: 1, | S0049: 1, H0194: 1, | H0327: 1, H0046: 1, | H0051: 1, S0051: 1, | T0010: 1, H0083: 1, | S0003: 1, H0644: 1, | H0628: 1, H0316: 1, | S0036: 1, H0040: 1, | H0413: 1, H0100: 1, | S0150: 1, L0769: 1, | L0373: 1, L0765: 1, | L0662: 1, L0794: 1, |
|                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |
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| L0649: 1, L0804: 1,<br>L0805: 1, L0789: 1,<br>L0666: 1, L0663: 1,<br>L0665: 1, H0144: 1,<br>S0374: 1, H0520: 1,<br>H0658: 1, H0666: 1,<br>H0672: 1, S0380: 1,<br>S0406: 1, L0754: 1,<br>L0756: 1, L0758: 1, | L0766: 5, L0438: 3,<br>L0777: 3, H0090: 2,<br>L0439: 2, L0731: 2,<br>L0759: 2, S0114: 1,<br>H0318: 1, L0471: 1,<br>H0695: 1, L0803: 1,<br>L0774: 1, L0775: 1,<br>L0776: 1, L0806: 1,<br>L0766: 1, H0690: 1,<br>H0668: 1, H0659: 1,<br>H0683: 1, H0659: 1,<br>H0670: 1, L0749: 1 and | L0748: 11, L0750: 5,<br>L0740: 4, L0756: 4,<br>L0758: 4, L0769: 3,<br>L0766: 3, L0776: 3,<br>L0779: 3, H0135: 2,<br>L0763: 2, L0770: 2, |
|   | Gln-20 to Glu-27,<br>Ser-43 to Ser-49,<br>Ser-89 to Ala-95.   | Pro-1 to Ser-9,<br>Glu-48 to Gly-54,<br>Gly-66 to Leu-71,<br>Pro-78 to Glu-84,<br>Ala-108 to Gln-116,<br>Ile-167 to Asp-172,            |
|   | 2684  | 2685  |
|   | 2230 -<br>1901  | 97 - 693  |
|   | 509   | 510   |
|   | 1015133   | 1015143   |
|   | HSPSI60   | НОСОС26   |

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|   |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                      |                     | _                      | _                  |                       |                       | _                     |
|   |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     | •                    |                     |                        |                    |                       |                       |                       |
|   |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠.                   |                     |                     |                     |                     |                     |                      |                     |                        |                    |                       |                       |                       |
| 96: 2, L0768: 2,                        | 0774: 2, L0783: 2, | .0809: 2, L.0438: 2, | H0519: 2, H0672: 2, | .0751: 2, L0747: 2, | ,0777: 2, L0755: 2, | .0757: 2, H0341: 1, | S0356: 1, S0442: 1, | 30444: 1, S0360: 1, | S0046: 1, H0431: 1, | .0040: 1, H0599: 1, | H0327: 1, H0046: 1, | H0024: 1, H0014: 1, | H0510: 1, H0688: 1, | H0708: 1, H0413: 1, | H0131: 1, S0150: 1, | S0426: 1, L0373: 1, | .0646: 1, L.0771: 1, | .0773: 1, L0650: 1, | .0666: 1, S0374: 1, | 10684: 1, H0660: 1, | S0380: 1, S0406: 1, | .0749: 1, L0752: 1, | .0753: 1, L.0588: 1, | .0599: 1, H0543: 1, | H0423: 1 and H0422: 1. | H0695: 124, H0542: | 48, H0730: 32, H0688: | 27, H0735: 25, H0684: | 24, H0728: 23, H0687: |
| 5. 11.075                               | <u>1</u> 2         | 108                  | H05                 | 1007                | 101                 | 101                 | S03                 | <b>S04</b>          | 300 <sub>S</sub>    | 00 <u>L</u>         | H03                 | 00H                 | H05                 | H07                 | H01                 | S042                | 106                  | 101                 | 907                 | 90H                 | S03                 | <u> 1</u> 93        | 107                  | 105                 | H04                    | 呈                  | 48, I                 | 27, I                 | 24.1                  |
| Thr-179 to His-185. L0796: 2, L0768: 2, |                    | . •                  |                     | ٠.                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     | ,                   |                      | •                   | ,                      | Pro-43 to Cys-48,  | Thr-75 to Gln-82.     |                       |                       |
|   |                    |                      |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                      |                     |                     |                     |                     |                     |                      |                     |                        | 2686               |                       |                       | _                     |
|   |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                      |                     |                     |                     |                     | •                   |                      |                     |                        | 1035 - 7           |                       |                       |                       |
|   |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                      |                     |                     |                     |                     |                     |                      |                     |                        | 51:1               |                       |                       |                       |
|   |                    |                      |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     | ,                   |                     |                     | •                    |                     |                        | 1015204            |                       |                       |                       |
|   |                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                      |                     |                        | HHEDC05            |                       |                       |                       |

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|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|--------------------|
|                       |                       |                       |                       |                       |                        |                     |                     | ~                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     | ,                      |                    |
| 23. H0744: 19. H0703: | 19, H0580: 18, H0717: | 17, H0685: 15, H0729: | 15, H0722: 15, H0740: | 13, H0733; 11, H0521: | 9, H0713: 8, H0543: 8, | H0494: 7, H0689: 7, | H0716: 6, H0741: 6, | H0696: 6, H0734: 5, | H0739: 4, H0545: 4, | H0699: 4, H0725: 4, | H0686: 3, H0592: 3, | H0587: 3, H0581: 3, | H0743: 3, H0726: 3, | H0690: 3, H0683: 3, | H0732: 3, H0712: 3, | H0742: 2, H0544: 2, | H0708: 2, H0488: 2, | H0724: 2, H0710: 2, | H0709: 2, H0555: 2, | H0171: 1, H0738: 1, | S0282: 1, H0600: 1, | H0586: 1, H0318: 1, | H0617: 1, S0036: 1, | H0561: 1, S0422: 1, | S0053: 1, S0216: 1, | H0723: 1, H0522: 1, | S0146: 1, H0727: 1, | S0260: 1 and S0436: 1. | L0753: 3, H0615: 1 |
|                       |                       |                       |                       | :                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                      |                    |
|                       |                       | •                     |                       | 1                     |                        |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                    |
| ,                     | •                     |                       |                       | <del></del>           |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     | •                   | •                   |                     |                     |                     | •                   | _                   | -                   |                     |                     |                        | 2687               |
|                       |                       |                       |                       |                       |                        |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 89 - 421           |
| ·                     |                       |                       |                       |                       |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 512                |
|                       | •                     |                       |                       |                       |                        | •                   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1015304            |
|                       |                       |                       |                       |                       |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        | HODES86            |

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|------------|-----------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|------------------|------------------|------------------|--------------------|---------------------|---------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------|---------------------|---------------------|-----------------|
|            |                       |                     | •                   |  |                     |                     |                     |                     |                    |                    |                  |                  |                  |                    | •                   |                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |             |                     |                     |                 |
|            |                       |                     |                     |  |                     |                     |                     |                     |                    |                    |                  |                  |                  |                    |                     |                     |                    | ·                  |                    |                     |                     |                     |                     |                     |                     |             |                     |                     | _               |
|            |                       |                     |                     |  |                     |                     |                     |                     |                    |                    |                  |                  |                  |                    |                     |                     |                    |                    |                    |                     |                     |                     | ,                   |                     |                     | *           |                     |                     |                 |
| _          |                       |                     |                     |  |                     |                     |                     |                     |                    |                    | _                |                  |                  |                    |                     |                     |                    |                    |                    |                     |                     |                     |                     | ·                   |                     |             |                     |                     |                 |
|            | H0585: 21, L0742: 12, | 0358: 8,            | 0126: 8,            | 10620: 7,                              | 100009: 6,          | 0408: 4,            | 10081: 4,           | 10660: 4,           | 0444: 3,           | 10599: 3,          | .0471: 3,        | 10617: 3,        | 10413: 3,        | 10672: 3,          | 0751: 3,            | 10171: 2,           | 0046: 2,           | 10333: 2,          | 10002: 2,          | 10706: 2,           | [0024: 2,           | 10356: 2,           | 0366: 2,            | 10412: 2,           | .0640: 2,           | L0532: 2,   | 0757: 2,            | 0604: 2,            | 10161: 1,       |
| and H0683: | H0585: 21             | L0747: 9, S0358: 8, | H0052: 8, S0126: 8, | H0141: 7, H0620:                       | L0748: 7, H0009: 6, | H0624: 4, S0408: 4, | H0427: 4, H0081: 4, | S0051: 4, H0660: 4, | L0750: 4, S0444: 3 | H0393: 3, H0599: 3 | H0618: 3, L0471: | H0083: 3, H0617: | H0708: 3, H0413. | H0494: 3, H0672: 3 | L0740: 3, L0751: 3, | L0755: 3, H0171: 2, | H0294: 2, S0046: 2 | H0455: 2, H0333: 2 | H0156: 2, H0002: 2 | H0097: 2, H0706: 2, | S0049: 2, H0024: 2, | H0373: 2, H0356: 2, | S0364: 2, S0366: 2, | H0135: 2, H0412: 2, | S0440: 2, L0640: 2, | L0766: 2, L | L0754: 2, L0757: 2, | S0031: 2, L0604: 2, | H0506: 2, H0161 |
|            | Gly-1 to Tyr-6,       | Lys-10 to Gly-19,   | Ser-46 to Lys-59.   |  |                     |                     |                     |                     |                    |                    | -                |                  |                  |                    |                     |                     |                    |                    |                    | •                   |                     |                     |                     |                     |                     |             |                     |                     | •               |
|            | 2688                  |                     | • 1                 |  |                     |                     |                     |                     |                    |                    |                  |                  |                  | ,                  |                     |                     |                    |                    |                    |                     |                     |                     |                     | •                   |                     |             |                     |                     |                 |
|            | 943 - 1164            |                     | :                   | ;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;; |                     |                     |                     |                     |                    |                    | <del>-</del>     |                  |                  |                    |                     |                     |                    |                    |                    |                     | ·                   | -                   |                     |                     |                     |             |                     |                     |                 |
|            | 513                   |                     |                     |  |                     |                     |                     |                     |                    |                    |                  |                  |                  |                    |                     |                     |                    |                    |                    | ٠                   |                     |                     |                     |                     |                     |             |                     |                     |                 |
|            | 1015324               |                     |                     |  |                     |                     |                     |                     |                    |                    |                  |                  |                  |                    |                     |                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |             |                     |                     |                 |
|            | HOPJU57               |                     |                     | •                                      |                     |                     |                     |                     |                    |                    | -                |                  |                  |                    |                     | -                   |                    |                    |                    |                     |                     |                     |                     |                     |                     |             |                     |                     |                 |

|          |                    |        |                    | :      |        |                     |          |       |          |              |        |          |                     |       |            |            |             |          |             |          |       |                     |        |                    |                  |                    |                     |        |          |
|----------|--------------------|--------|--------------------|--------|--------|---------------------|----------|-------|----------|--------------|--------|----------|---------------------|-------|------------|------------|-------------|----------|-------------|----------|-------|---------------------|--------|--------------------|------------------|--------------------|---------------------|--------|----------|
| _        |                    |        | _                  | · ·    |        | _                   |          |       |          |              |        |          |                     |       |            | _          |             |          |             |          |       | _                   |        |                    |                  |                    |                     |        |          |
|          |                    |        |                    |        |        |                     |          |       |          |              |        |          |                     |       |            |            |             |          |             |          |       |                     |        |                    |                  |                    |                     |        |          |
| L        |                    |        |                    |        |        |                     |          |       |          |              |        |          |                     |       |            | _          |             |          |             |          |       |                     |        |                    |                  |                    |                     |        |          |
| ا<br>آسا |                    | ·•     | l,                 | •      |        | _ •                 |          | T,    | <b>,</b> | <del>_</del> | ·      | <u>,</u> | ·                   |       | <b>_</b>   | Ι,         | <b></b>     | ÷        | <b></b>     |          | Ţ,    | •                   |        | •                  |                  |                    | •                   | •      | •        |
| 716:     |                    | 664: 1 | .869               | 376: 1 | 208: 1 | 411:1               | )16: 1   | 438:  | 586:     | 574:         | 013: 1 | 390      | 173:                | 204:  | 327:       | , H0544: 1 | H0051: 1    | 340:1    | 1, H0424: 1 | 142: ]   | 032:  | 038: 1              | 041: ] | <b>438:</b> 1      | 652:             | 769: 1             | 771: 1              | 768: 1 | L0776: 1 |
| 1, HO    | 1, HC              | 1, H0  | 1, HC              | 1, SO  | 1, HQ  | 1, H0               | 1, S6    | 1, H0 | 1, H0    | 1, HC        | 1, H0  | 1, HG    | 1, HC               | 1, HO | 1, HC      | 1, H0      | 1, H0       | 1, S0    | 1, H0       | 1, 15    | 1, H0 | 1, S0               | 1, T0  | 1, SQ              | 1, H0            | 1, 1.0             | 1, LO               | 1,10   | 1, LO    |
| 0717:    | H0583: 1, H0657: 1 | )282:  | H0402: 1, H0638: 1 | 354:   | 3360:  | S0476: 1, H0411: 1, | 5022:    | 0392: | 0000     | 0331:        | 0109:  | 0253:    | H0581: 1, H0173: 1, | 0194: | 0231:      | H0530: 1,  | H0123: 1    | H0099: 1 | H0428: 1    | H0213: 1 | 0628: | H0634: 1, S0038: 1, | 0100:  | F0042: 1, S0438: 1 | H0641: 1, H0652: | S0144: 1, L0769: 1 | .0638: 1, L0771: 1, | 3662:  | .0653:   |
| H        | 王                  | Š      | 王                  | Š      | S      | <u>x</u>            | <u>~</u> | 田     | H        | H            | Ē      | 工        | 耳                   | H     | 田          | 田          | 耳           | H        | H           | 耳        | H     | Ħ                   | H      | Ĕ                  | 耳                | S                  | 1                   |        |          |
|          |                    |        |                    |        |        |                     |          |       |          |              |        |          |                     |       |            |            |             |          |             |          |       |                     |        |                    |                  |                    |                     |        | ı        |
|          |                    |        |                    |        |        |                     |          |       |          |              |        |          |                     |       |            |            | •           |          |             |          |       |                     |        |                    |                  |                    |                     |        | •        |
|          |                    |        |                    |        |        |                     |          |       |          |              |        |          |                     |       |            |            |             |          |             |          |       |                     |        |                    |                  |                    |                     |        |          |
|          |                    |        |                    | ,      |        | •                   |          |       |          |              |        | •        |                     |       |            |            |             |          |             |          | •     |                     |        |                    |                  |                    |                     |        |          |
| $\vdash$ | -                  |        |                    | _      | _      |                     |          |       |          |              |        |          |                     |       |            |            |             |          |             |          |       |                     | _      |                    | _                | _                  |                     |        |          |
|          |                    |        |                    |        |        |                     |          |       |          |              |        |          |                     | •     |            |            |             |          |             |          |       |                     |        |                    |                  |                    |                     |        |          |
| L        |                    | -      |                    |        |        |                     |          |       |          |              |        |          |                     |       |            |            |             | _        |             |          |       |                     | _      |                    |                  |                    |                     |        |          |
|          |                    |        |                    |        |        |                     |          |       |          |              |        |          |                     |       |            |            | _           |          |             |          |       |                     |        |                    |                  |                    |                     |        |          |
|          |                    |        |                    |        |        |                     |          |       |          |              |        |          |                     |       |            |            |             |          |             | ٠        |       |                     |        |                    |                  |                    |                     |        | i        |
|          |                    |        |                    |        |        |                     |          |       |          |              |        |          |                     |       |            |            |             |          |             |          |       |                     |        |                    |                  |                    |                     |        |          |
| -        |                    |        |                    |        |        |                     |          |       |          |              |        |          |                     |       | <u>.</u> - |            | <del></del> |          |             |          |       |                     |        |                    |                  |                    |                     |        |          |
|          |                    |        |                    |        |        |                     |          |       |          | •            |        |          |                     |       |            |            |             |          |             |          |       |                     |        |                    |                  |                    |                     |        |          |
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|---|---|
|   | 104500,<br>125490,<br>137600,<br>147790,<br>173910,<br>189800,<br>217030,<br>252500,<br>600919,<br>601542   |
|   | 4q21-q25  |
| L0807: 1, H0593: 1,<br>H0682: 1, H0684: 1,<br>H0658: 1, H0670: 1,<br>S0330: 1, H0522: 1,<br>H0576: 1, L0612: 1,<br>S3014: 1, S0027: 1,<br>L074: 1, L0745: 1,<br>L0731: 1, H0445: 1 and<br>S0434: 1. | H0494: 6, H0046: 5,<br>S0028: 5, H0519: 4,<br>H0713: 3, H0547: 3,<br>H00458: 2, H0574: 2,<br>H0013: 2, H0551: 2,<br>T0042: 2, L0438: 2,<br>H0521: 2, S3014: 2,<br>H0723: 2, H0506: 2,<br>H0716: 1, H0171: 1,<br>H0716: 1, S0134: 1,<br>H0650: 1, H0656: 1,<br>S0282: 1, H0449: 1,<br>S0282: 1, S0212: 1,<br>S0282: 1, S0212: 1,<br>S0282: 1, S0213: 1,<br>S0354: 1, S0213: 1,<br>S0354: 1, S0280: 1,<br>H0659: 1, H0675: 1,<br>H0659: 1, H0675: 1,<br>H0659: 1, H0675: 1, |
|   | Pro-13 to Pro-23.   |
|   | 2689  |
|   | 2 - 1204  |
|   | 514   |
|   | 1015343   |
|   | HVCAC71   |

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| H0596: 1, H0530: 1,<br>H0544: 1, H0081: 1,<br>H0050: 1, H0014: 1,<br>H0051: 1, S0003: 1,<br>S0022: 1, L0194: 1,<br>H0213: 1, H0644: 1,<br>S0364: 1, S0366: 1,<br>H0623: 1, L0475: 1,<br>H0623: 1, L0475: 1,<br>H0561: 1, S0150: 1,<br>H0561: 1, S0150: 1,<br>H0560: 1, H0660: 1,<br>H0560: 1, H0660: 1,<br>H0666: 1, H0660: 1,<br>H0666: 1, H0660: 1,<br>H0666: 1, H0660: 1,<br>S0380: 1, H0696: 1,<br>S0434: 1, S0436: 1,<br>S0434: 1, S0436: 1,<br>S0194: 1, H0542: 1,<br>H0543: 1, S0424: 1 and | H0293: 1.<br>L0749: 14, L0439: 8,<br>L0438: 6, L0748: 4,<br>L0747: 4, L0779: 4,<br>L0769: 3, S0442: 2,<br>S0038: 2, L0764: 2,<br>L0662: 2, L0766: 2, |
|  | Val-9 to Gly-18, Pro-21 to Gly-27, Gly-81 to Trp-91, Lys-120 to Gly-126, Ile-166 to Pro-172, Val-185 to Ala-192,                                     |
| •  | 2690   |
|  | 6 - 1076   |
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|---------------------|---------------------|---------------------|---------------------|----------------------|--------|--------------------|-----------|------------------|------------------|------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|------------------|--|------------------|-----------|------------------|------------------|------------------|------------------|------------------|---------------------|-----------|
|                     |                     |                     |                     |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  |                     |           |
| <u> </u>            |                     |                     |                     |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  |                     |           |
|                     | . •                 | _ <b>.</b>          | •                   | •                    |        |                    | _         |                  | •                | •          |                  | •                | ٠ .              |                  | <u>۔</u>         |                  |                  | •                  |                  |  | •                | •         | •                |                  |                  | •                | •                |                     | 3: 1.     |
| 09: 2               | 44: 7               | 754: 2              | 56: 2               | 80:2                 | 170: 1 | 556: 1             | 82: 1     | 17: 1            | 586: 1           | 10:1       | 457: ]           | <b>171:</b> 1    | 10:1             | 588: 1           | 169: 1           | 35: 1            | 560: 1           | 207: 1             | 547: ]           | 22: 1  | 24:1             | L0655: 1  | 547: 1           | 583: 1           | 672: ]           | 744: 1           | 58: 1            | 93: 1               | and H0423 |
| , L08               | OH (                | , LO                | , LO7               | , LO7                | l, H0  | l, H0              | 1, S0282: | 1, 1.07          | 1,10             | 1, \$0010: | l, H0            | 1,10             | , T00            | , HO             | l, H0            | , HO             | l, H0            | , H02              | l, H0            | , S04  | , L08            | 1,106     | , H0             | , H06            | I, H0            | 1, LO            | 1, 1.07          | , LOS               | l and     |
| L0659: 2, L0809: 2, | LUDOO: 2, HU144: 2, | H0658: 2, L0754: 2, | L0750: 2, L0756: 2, | .0777: 2, L.0780: 2, | H0170: | H0171: 1, H0556: 1 | 30402: 1  | H0645: 1, L0717: | 10586: 1, L0586: | 10427: 1   | 10046: 1, H0457: | H0050: 1, L0471: | S0051: 1, T0010: | 36028: 1, H0688: | H0031: 1, H0169: | S0036: 1, H0135: | H0494: 1, H0560: | S0438: 1, H0207: 1 | H0633: 1, H0647: | S0142: 1, S0422:                             | .0803: 1, L0804: | .0776: 1, | S0148: 1, H0547: | S0126: 1, H0683: | H0670: 1, H0672: | H0539: 1, L0744: | .0757: 1, L0758: | .0759: 1, L.0593: 1 | H0543:    |
|                     |                     | %<br>품              |                     | 2                    | 田      | E<br>E             | <u>%</u>  | 8                | E E              | 丑          | 田                | 呈                | <u> </u>         | 98               | E<br>E           | <u>80</u>        | H                | <u>8</u>           | 丑                | 80   | 9                | <u>2</u>  | 80               | 8                | H<br>H           | H                | 9                | 2                   | <u> </u>  |
| er-212              | /S-74               | yr-25               | sn-29               |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  | •         |                  |                  |                  |                  |                  |                     |           |
| Asp-207 to Ser-212, | Ser-241 to Lys-248, | Trp-250 to Tyr-258, | Gln-287 to Asn-292. |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  | ٠                |           |                  |                  |                  |                  |                  |                     |           |
| p-20                | r-241               | p-250               | n-287               |                      |        | ,                  |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  |                     |           |
| As                  | N<br>N              | Ë                   | <u>ত</u>            |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  | <u>.                                    </u> |                  |           |                  |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  | •                |                  |                     |           |
|                     |                     |                     |                     |                      |        | -                  |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  | ٠                   |           |
|                     |                     |                     |                     |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  | ٠                |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  | •                   |           |
|                     | -                   | _                   |                     |                      |        | <u></u>            |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    |                  |  | <del></del>      |           |                  |                  |                  |                  |                  | -                   |           |
|                     |                     |                     |                     |                      |        |                    |           |                  |                  |            |                  |                  |                  |                  |                  |                  |                  |                    | ٠                |  |                  |           |                  |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     |                      |        |                    |           |                  |                  | •          |                  |                  |                  |                  |                  |                  |                  |                    |                  |  |                  |           |                  |                  |                  |                  |                  |                     |           |

|                        |                     |                     |                     |                     |                     |                     |                     |                        | 104500,                    | 125490,             | 147790,             | 173910,             | 252500,             | 252500              |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |
|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                        |                     |                     |                     |                     |                     |                     |                     |                        | 4q21                       | ·                   |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0766: 4, L0748: 4,    | S0037: 2, L0749: 2, | S0360: 1, H0571: 1, | S0003: 1, H0553: 1, | H0551: 1, S0142: 1, | S0002: 1, L0794: 1, | L0804: 1, H0519: 1, | H0659: 1, H0660: 1, | L0754: 1 and H0136: 1. | H0585: 26, H0141: 12, 4q21 | H0623: 6, L0766: 6, | H0013: 5, H0318: 5, | H0556: 4, H0657: 4, | H0457: 4, L0471: 4, | L0776: 4, H0659: 4, | S0360: 3, H0599: 3, | S0010: 3, S0003: 3, | H0634: 3, T0067: 3, | H0538: 3, L0598: 3, | L0770: 3, L0764: 3, | H0144: 3, L0751: 3, | L0747: 3, L0757: 3, | L0758: 3, H0445: 3, | H0542: 3, T0002: 2, | S0418: 2, S0376: 2, | S0132: 2, S0222: 2, | H0497: 2, H0559: 2, | H0620: 2, H0083: 2, | H0428: 2, H0124: 2, | H0068: 2, H0090: 2, |
| 2691 Lys-90 to Arg-96. |                     |                     |                     |                     |                     |                     |                     | -                      |                            |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     | ·                   |
| 2691                   |                     |                     |                     | ,                   |                     |                     |                     |                        | 2692                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠.                  |                     |                     |                     |                     |                     |
| 57 - 629               |                     |                     |                     |                     |                     |                     |                     |                        | 216 - 1232                 |                     | •                   |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 516                    |                     |                     |                     |                     | ,                   |                     |                     |                        | 217                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| 1015430                |                     |                     |                     | ,                   |                     |                     |                     |                        | 1015563                    |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |
| HLWDB78                |                     |                     |                     |                     |                     |                     |                     |                        | HPCQU04                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |

| Γ                   |                     | <del>-</del>        |            |                     |                     |                     |                     |                     |                    |                    | _                |                    |                  |                  |                  |                  |                  |                  |                  | _                |                  |                  |                  |                  |                  |                  |                  |           |                  |
|---------------------|---------------------|---------------------|------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|------------------|
|                     |                     |                     |            |                     |                     |                     |                     |                     |                    |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
|                     |                     |                     |            |                     |                     |                     |                     |                     |                    |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
| _                   |                     |                     |            |                     | _                   |                     |                     |                     |                    | _                  |                  | _                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
|                     | •                   |                     |            |                     |                     |                     |                     |                     |                    |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
| _                   |                     |                     |            |                     |                     | _                   |                     |                     |                    |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | -         |                  |
| 2,                  | <b>%</b>            | ų,                  | 2,         | ر.                  | ų                   | رث                  | 4                   | ۷,                  | 4,                 | رح.                | 2,               | T,                 | 1,               | 1,               | 1,               | 1,               | 1,               | 1,               | <del></del>      | ۲,               | T,               | 1,               | ۲,               | <del>_</del>     | <b>—</b>         | 1,               | Ţ,               | 1,        | 1,               |
| 0494:               | 769:                | 7775:               | L0655: 2,  | 526:                | 0519:               | 330: 2              | 3706:               | 745:                | 593:               | 026: (             | 0423:            | 3686:              | 049:             | 650:             | 341:             | 7420:            | 717:             | 549:             | 2441:            | .500             | )486:            | 280:             | 0581:            | 0046:            | 3050:            | 3015:            | 0375:            | 1, H0615: | 3644:            |
| 2, H                | 2, L(               | 2, I.C              | 2, LC      | 2, 170              | 2, H                | 2, S0               | 2, S(               | 2, TC               | 2, 1.0             | 2, S0              | 2, H             | 1, H(              | 1, TO            | 1, H(            | 1, H(            | 1, SC            | 1, LO            | 1, H(            | 1, H             | 1, S(            | 1, H(            | 1, S0            | 1, H             | 1, H             | 1, H(            | 1, H             | 1, H             | 1, H(     | 1, H             |
| H0412: 2, H0494: 2, | H0561: 2, L0769: 2, | .0372: 2, L0775: 2, | 0375: 2, 1 | .0517: 2, L0526: 2, | H0520: 2, H0519: 2, | S0126: 2, S0330: 2, | H0521: 2, S0206: 2, | .0743: 2, L0745: 2, | .0752: 2, L0593: 2 | J0595: 2, S0026: 2 | H0543: 2, H0423: | H0265: 1, H0686: 1 | S0342: 1, T0049: | S0134: 1, H0650: | S0116: 1, H0341: | H0661: 1, S0420: | S0356: 1, L0717: | S0278: 1, H0549: | H0550: 1, H0441: | 10442: 1, S0005: | .0623: 1, H0486: | F0114: 1, S0280: | H0575: 1, H0581: | H0052: 1, H0046: | H0123: 1, H0050: | H0012: 1, H0015: | H0239: 1, H0375: | S0022: 1  | H0030: 1, H0644: |
| 王                   | <u> </u>            | <u> </u>            | <u></u>    | <u> </u>            | 프                   | S                   | Œ                   | <u> </u>            | Н                  |                    | 프                | <u> </u>           | S                | S                | S                | 王                | S                | S                | <u> </u>         | <u> </u>         | ᆜ                | <u>F</u>         | <u> </u>         | <u> </u>         | <u> </u>         | Œ                | <u> </u>         | S         | <u> </u>         |
|                     |                     |                     |            |                     |                     |                     |                     |                     |                    |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
|                     |                     |                     |            |                     |                     |                     |                     |                     |                    |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
|                     |                     |                     |            |                     |                     |                     |                     |                     | •                  |                    |                  |                    |                  |                  | -                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
|                     |                     |                     |            |                     |                     |                     |                     |                     |                    |                    |                  |                    |                  |                  |                  | •                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
| <u> </u>            |                     |                     |            |                     |                     | ·,                  |                     |                     |                    |                    | -                |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
|                     |                     |                     |            |                     |                     |                     |                     |                     |                    |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
| _                   |                     |                     |            |                     |                     |                     |                     |                     |                    | _                  |                  |                    |                  |                  |                  |                  | <del>.</del>     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
|                     |                     |                     |            |                     |                     |                     |                     |                     |                    |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
|                     |                     |                     |            | ,                   |                     |                     |                     |                     |                    |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
|                     |                     |                     |            |                     |                     |                     |                     |                     |                    |                    |                  | ٠                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
| _                   |                     |                     |            |                     |                     | <del></del>         |                     |                     | <del></del>        |                    |                  |                    | <del>.</del>     |                  |                  |                  |                  | <del>-</del>     | .н.              |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
|                     |                     |                     | ,          |                     |                     |                     |                     |                     |                    |                    |                  |                    |                  |                  |                  |                  |                  | ٠                |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |
|                     |                     |                     |            |                     |                     |                     |                     |                     |                    |                    |                  |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |

|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     | •                   |                        |                     |                     |                     |                     |                        |                     |
|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|
| H0628: 1, H0617: 1, | H0674: 1, H0316: 1, | S0036: 1, H0591: 1, | Ţ | H0100: 1, S0372: 1, | H0509: 1, H0132: 1, | S0142: 1, S0210: 1, | S0002: 1, H0529: 1, | L0369: 1, L0520: 1, | L0763: 1, L0761: 1, | L0667: 1, L0386: 1, | L0657: 1, L0789: 1, | L0666: 1, H0697: 1, | T0068: 1, H0547: 1, | H0593: 1, H0670: 1, | H0539: 1, H0555: 1, | H0436: 1, S3014: 1, | S0028: 1, L0754: 1, | L0750: 1, L0756: 1, | L0755: 1, L0588: 1, | L0599: 1, L0362: 1, | L0361: 1, L0601: 1, | S0011: 1, H0665: 1, | S0424: 1 and L0600: 1. | L0599: 2, H0253: 1, | H0581: 1, H0263: 1, | H0200: 1, H0040: 1, | H0623: 1, H0280: 1, | H0593: 1, H0521: 1 and | H0555: 1.           |
|                     |                     |                     |   |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | • .                 |                     |                     |                     |                        | Pro-11 to Gly-18,   | Glu-24 to Cys-32,   | Glu-34 to Met-47,   | Ala-55 to Glu-60,   | Ile-75 to Gln-81,      | Ser-132 to Thr-139, |
|                     |                     |                     |   |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                        | 2693                |                     |                     |                     |                        |                     |
|                     | -                   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                        | 1387 - 335          |                     |                     |                     | . •                    |                     |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        | 518                 |                     |                     |                     | ,                      |                     |
|                     |                     |                     |   |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     | ,                   |                        | 1015574             |                     |                     |                     | •                      |                     |
|                     |                     |                     |   |                     |                     |                     | 1                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HDPAT52             | ,                   |                     |                     |                        |                     |

| г—                  | :                   |                     |                     |                     |                     |                    |                      |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     | ,                  |                      |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                    |                      |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     | ı                   |
|                     | •                   |                     |                     |                     |                     |                    |                      |                     |                     |                     |                     | •                   |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                    |                      |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                      | •                   |                     | _                   |                     |
|                     | ·.                  |                     |                     |                     |                     |                    | H0124: 11, L0751: 5, | ,0747: 4, H0295: 3, | 10620: 3, L0794: 3, | .0741: 3, L0758: 3, | H0686: 2, H0549: 2, | H0617: 2, L0768: 2, | 0766: 2, L0774: 2, | .0745: 2, L0731: 2, | H0656: 1, S0420: 1, | S0444: 1, S0360: 1, | S0408: 1, S0222: 1, | 10486: 1, H0013: 1, | .0021: 1, H0052: 1, | H0327: 1, H0009: 1, | [0010: 1, H0033: 1, | H0604: 1, H0031: 1, | H0068: 1, H0038: 1, | 10100: 1, H0509: 1, | .0769: 1, L.0761: 1, | .0804: 1, L0775: 1, | .0636: 1, L0809: 1, | .0792: 1, L4501: 1, | .0665: 1, L0438: 1, |
| 80,                 |                     | 23,                 | 4,                  | 69,                 | 25,                 | 30.                | 臣                    | <u> </u>            | <u> </u>            | اسر                 | <u> </u>            | _                   | <u>2</u>           | <u>``</u>           | H<br>H              | <u>80</u>           | <u>20</u>           | HO                  | <u> </u>            | H<br>H              | <u>Ū</u>            | H                   | 면                   | H                   | 2                    | Ŝ                   | <u>3</u>            | <u>ප</u>            | <u> </u>            |
| Gln-167 to Gln-180, | Leu-183 to Phe-195, | Gln-211 to Gln-223, | Gln-232 to Leu-244, | Gln-253 to Ala-269, | Pro-274 to Leu-292, | Thr-302 to Thr-330 | Asp-1 to Lys-6,      | Gln-29 to Gly-35,   | Pro-39 to Arg-49,   | Pro-51 to Trp-58,   | Ser-78 to Gly-83,   | Ser-179 to His-194. |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠,                  |                     |                      |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                    | 2694                 |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                    | 28 - 747             |                     |                     |                     | •                   |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      | •                   |                     |                     |                     |
|                     |                     |                     |                     | •                   |                     |                    | 519                  |                     |                     | •                   |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                    | 1015620              |                     |                     |                     | ,                   |                     | -                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | :                  | HAOSL81              |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |

| <del></del>   |  |   | <del></del>  | Τ                   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     | _  |                     |                     |
|---|--|---|--|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|
|   |  |   |  |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     | •                   | •  |                     |                     |
|   | 20q11:21-<br>q11.23  |   | :  |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |
| H0684: 1, H0660: 1,<br>H0539: 1, H0555: 1,<br>L0742: 1, L0786: 1,<br>H0668: 1 and S0424: 1. | i  |   |  | L0809: 7, L0758: 7, | S0007: 4, L0662: 4, | .0/94: 4, L0665: 4,<br>0439: 4_1 0754: 4 | 10333: 3, L0769: 3, | .0761: 3, L0803: 3, | 10395: 2, S0222: 2, | H0124: 2, S0036: 2, | .0535: 2, L0666: 2, | 10658: 2, L0751: 2, | .0747: 2, L0485: 2, | H0716: 1, H0295: 1, | H0402: 1, S0418: 1, | 50442: 1, m0019: 1,<br>m502: 1 1 0623: 1 | H0786: 1, L0025: 1, | .0021: 1, H0618: 1, |
|   | Gly-4 to Gln-11,<br>Val-87 to Asn-97,<br>Gly-168 to Leu-178, | Asp-194 to Phe-200,<br>Phe-205 to Arg-210,<br>Gln-292 to Glv-306. | Gly-328 to Ser-342,<br>Gly-349 to Asp-358,<br>His 365 to Asp-379 | .                   |                     | Pro-45 to Giu-5/, 12 Pro-64 to Trm-70    |                     | 6.<br>H             |                     | <u> </u>            | h-d                 |                     |                     |                     | <u> </u>            |  | <u>-1. )</u>        |                     |
|   | 2695   |   |  | 2696                |                     |  |                     |                     |                     |                     |                     |                     |                     |                     | •                   |  |                     |                     |
|   | 1 - 1152   |   |  | 3 - 1100            |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |
|   | 520  |   | •  | 521                 |                     |  | _                   |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |
|   | 1015814  |   |  | 1015994             |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |
|   | HMWIU46  |   |  | HSXCQ19             |                     |  | ·;                  |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |

| Γ                   |                     |                                       |   |                     |                     | _                   |                     | -                   |                     |                     | -                   |                     | _                   |                     |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |                     |                     |                     | _                   | $\neg$              |
|---------------------|---------------------|---------------------------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                                       |   | •                   | ·                   |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                        |           | 104770,             | 107670,             | 110700,             | 145001,             | 146790,             | 191315,             | 601412,             | 601652,             | 601863,             | 602491              |
|                     |                     |                                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ι                      |           | 1q21.1              |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0318: 1, H0052: 1, | H0251: 1, H0123: 1, | H0050: 1, H0012: 1,                   | • | H0615: 1, T0006: 1, | H0673: 1, H0135: 1, | H0087: 1, H0264: 1, | H0100: 1, L0763: 1, | L5565: 1, L0667: 1, | L0772: 1, L0644: 1, | L0768: 1, L0775: 1, | L0805: 1, L0655: 1, | L0659: 1, L0526: 1, | L0663: 1, S0052: 1, | H0682: 1, H0660: 1, | L0602: 1, L0743: 1, | L0750: 1, L0756: 1, | L0779: 1, L0777: 1, | L0592: 1, H0136: 1 and | S0424: 1. | L0754: 3, L0662: 2, | L0766: 2, L0805: 2, | S0052: 2, L0747: 2, | L0749: 2, L0731: 2, | L0758: 2, L0759: 2, | L0591: 2, L0599: 2, | L0595: 2, S0045: 1, | L0021: 1, H0053: 1, | H0318: 1, H0150: 1, | H0617: 1, H0040: 1, |
|                     |                     |                                       |   | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Pro-8 to Asn-22,    | Thr-31 to Ser-36.   |                     |                     |                     |                     |                     |                     | -                   |                     |
|                     |                     |                                       |   | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2697                |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     | · · · · · · · · · · · · · · · · · · · |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 316 - 546           |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 522                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1016272             |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                                       | _ |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | ,         | HNOAG06             |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                     |                     |                     |                     | ,                   | <u> </u>            |                        |                   |                       |  |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-------------------|-----------------------|--|----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                        |                   | •                     |  |    |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0359: 1, L0770: 1, | L0521: 1, L0/68: 1, | L0803: 1, L0804: 1, | L0659: 1, L0809: 1, | L0789: 1, H0648: 1, | H0651: 1, L0779: 1, | L0780: 1 and L0752: 1. | AR052: 27, AR033: | 27, AR039: 25, AR053: |  | 12 | L0776: 4, L0783: 4, | H0624: 3, H0559: 3, | H0620: 3, H0615: 3, | H0100: 3, L0769: 3, | L0766: 3, L0755: 3, | H0619: 2, H0081: 2, | H0604: 2, L0775: 2, | L0375: 2, L0659: 2, | L0809: 2, H0670: 2, | H0672: 2, H0539: 2, | L0777: 2, L0759: 2, | T0002: 1, H0295: 1, | T0049: 1, H0657: 1, | H0381: 1, H0661: 1, | H0662: 1, S0442: 1, | 80376: 1, 80360: 1, | S0408: 1, H0550: 1, |
|                     |                     |                     |                     |                     |                     |                        |                   | •                     |  | •  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                        | 2698              |                       |  |    | ,                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | . •                 |                     |                     |
|                     |                     |                     |                     | :                   |                     |                        | 3 - 656           |                       |  |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |
|                     |                     |                     |                     |                     |                     |                        | 523               |                       |  |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                        | 1016351           |                       |  |    | •                   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                        | HE2KN09           |                       |  |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

PCT/US01/18569

|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     | ,                   |                     |                     |    |                     |                     |                     |                     | ,                      |           |                    |                    |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|--------------------|--------------------|---------------------|
|                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                        |           |                    |                    |                     |
| S0222: 1, H0486: 1, | H0156: 1, H0599: 1, | H0052: 1, H0597: 1, | H0545: 1, H0565: 1, | H0563: 1, H0012: 1, | H0373: 1, H0266: 1, | H0292: 1, H0284: 1, | T0006: 1, H0181: 1, | H0617: 1, H0264: 1, | H0413: 1, H0059: 1, | H0494: 1, H0509: 1, | H0529: 1, L0763: 1, | L0770: 1, L0796: 1, | L0639: 1, L0646: 1, | L0643: 1, L0645: 1, | L0774: 1, L0806: 1, | L0519: 1, L0665: 1, | H0144: 1, L0438: 1, | L0352: 1, H0520: 1, | H0547: 1, S0126: 1, | Ξ, | S0380: 1, H0521: 1, | H0696: 1, H0576: 1, | L0439: 1, L0747: 1, | L0750: 1, L0752: 1, | L0753: 1, L0731: 1 and | H0543: 1. | H0620: 1, H0130: 1 | and HU539: 1.      | S0276: 7, H0543: 6, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |    |                     |                     | •                   |                     |                        |           | Asp-55 to Cys-73,  | Fro-/5 to 1 yr-85. | Leu-36 to Glu-41,   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                        |           | 2699               |                    | 2700                |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     | ***                 | ***                 |                     | _  |                     |                     |                     |                     |                        | •         | 1678 - 248         |                    | 148 - 990           |
|                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                        |           | 524                |                    | 525                 |
|                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    | •                   |                     |                     | , <del>-</del>      |                        |           | 1016740            |                    | 1016768             |
|                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                        |           | HISDH58            |                    | HSPSB62             |

|                     |                     |                     | •                   | 2                   | •                   | _                   |                     |                     |                     |                     |                     | `                   |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                  |                   |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|------------------|-------------------|---------------------|
|                     |                     |                     |                     | :                   | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                  |                   |                     |
| S0358: 3, H0046: 3, | H0424: 3, L0748: 3, |                     | H0661: 2, S0420: 2, | H0052: 2, H0135: 2, |                     | L0752: 2, L0758: 2, | H0422: 2, H0657: 1, | H0484: 1, H0483: 1, | H0638: 1, S0360: 1, | S0132: 1, H0645: 1, | H0550: 1, H0391: 1, | T0039: 1, H0250: 1, | S0010: 1, H0009: 1, | H0123: 1, H0081: 1, | S0051: 1, H0428: 1, | H0040: 1, S0038: 1, | S0144: 1, H0547: 1, | H0593: 1, H0683: 1, | H0670: 1, H0518: 1, | H0134: 1, S0037: 1, | S3014: 1, S0027: 1, | S0032: 1, L0744: 1, | L0740: 1, L0746: 1, | L0731: 1, H0445: 1, | L0596: 1, S0011: 1 and | H0542: 1. |                  | 1, AR061:         | AR096: 1, AR104: 0, |
| Asp-48 to Asp-55,   | Ser-104 to Glu-199, | Pro-202 to Trp-233, | Gly-236 to Ala-247, | Phe-256 to Ser-263, | Glu-273 to Asp-281. |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Gly-1 to Met-15, | Met-60 to Gln-67, | Val-76 to Gly-82,   |
|                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     | *                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2701             |                   |                     |
|                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                        |           | 109 - 729        |                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 526              |                   |                     |
|                     | •                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1016939          | ·                 |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HE2FR37          |                   |                     |

|                                      |   |                     |                     |  |                         |                   |                   |  | T .                   |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     | $\neg$              |
|--------------------------------------|---|---------------------|---------------------|--|-------------------------|-------------------|-------------------|--|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                                      |   |                     |                     |  |                         |                   | - T-              |  | 107470,               | 107470,             | 107470,             | 121014,             | 142470,             | 156225,             | 164200,             | 164200,             | 207800,             | 601316,             | 601410,             | 601757,             | 602067              |                     |                     |                     |
|                                      |   |                     |                     |  |                         |                   |                   |  | 6q23                  |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| AR053: 0, AR033: 0,                  | H0328: 2, H0124: 2,<br>L0766: 2, H0171: 1,<br>L006: 1, S0360: 1 | H0329: 1, H0156: 1, | H0615: 1, H0477: 1, | S0440: 1, L0598: 1,<br>H0547: 1, S0126: 1, | \$0168: 1 and H0595: 1. |                   |                   | ,  | L0748: 38, L0747: 30, | L0759: 7, S0360: 5, | L0664: 5, L0779: 5, | H0486: 4, S0010: 4, | L0758: 4, S0222: 3, | L0455: 3, S0386: 3, | L0764: 3, L0771: 3, | L0775: 3, L0438: 3, | S0028: 3, L0749: 3, | H0580: 2, H0208: 2, | H0013: 2, S0280: 2, | H0575: 2, H0251: 2, | H0024: 2, S0214: 2, | H0428: 2, H0622: 2, | H0031: 2, H0644: 2, | L0646: 2, L0800: 2, |
| Leu-117 to Arg-123. AR053: 0, AR033: |   |                     |                     |  |                         | Met-34 to Gly-50, | Asp-69 to Trp-90, | Asp-99 to Lys-107,<br>Val-164 to Thr-170 | His-1 to Arg-12.      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                      |   | •                   |                     |  |                         | 2702              |                   |  | 2703                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                      |   |                     |                     |  |                         | 1-618             |                   |  | 3-1196                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|                                      |   | :                   |                     |  |                         | 527               |                   |  | 528                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|                                      |   |                     |                     |  |                         | 1017051           |                   |  | 1017227               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                      |   |                     |                     |  |                         | HBJHU33           |                   |  | HCOOZ88               | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                     | •                   | •                   |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |   |                     |                     | •                   |                     | -                   |                     |                     |                     |                     | •                   |                     | •                   |                     | ,                   |                     | _                   |                     |                     |                     |                     |                     |                     |
| L0773: 2, L0662: 2, | L0794: 2, L0804: 2, | H0521: 2, L0752: 2, | S0026: 2, H0583: 1, | H0459: 1, S0418: 1, | S0356: 1, H0675: 1, | S0045: 1, H0619: 1, |   | F0109: 1, H0581: 1, | H0263: 1, H0596: 1, | H0232: 1, H0327: 1, | L0471: 1, H0057: 1, | H0375: 1, H0266: 1, | S0003: 1, H0688: 1, | H0553: 1, H0376: 1, | H0163: 1, H0090: 1, | H0591: 1, H0616: 1, | S0370: 1, S0382: 1, | H0529: 1, L0770: 1, | L0769: 1, L0638: 1, | L0761: 1, L0772: 1, | L0642: 1, L0767: 1, | L0768: 1, L0364: 1, | L0766: 1, L0606: 1, | L0659: 1, L0809: 1, | L0663: 1, H0144: 1, | L0565: 1, L0352: 1, | S0126: 1, H0682: 1, | H0659: 1, H0670: 1, | H0672: 1, L0602: 1, |
|                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ·<br>-              |                     |                     |                     |                     |                     |                     | - |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | -                   |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | •                   |   |                     |                     |                     | •                   |                     |                     |                     |                     | •                   |                     | -                   |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | •                   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| 77   |   |  |
|--|---|--|
| H0518: 1, S0146: 1,<br>S3014: 1, L0439: 1,<br>L0745: 1, L0750: 1,<br>L0777: 1, L0755: 1,<br>L0731: 1, H0595: 1,<br>L0596: 1, H0543: 1 and<br>H0352: 1. | L0599: 2, H0265: 1,<br>S0114: 1, S0116: 1,<br>H0486: 1, H0031: 1,<br>H0090: 1, H0616: 1,<br>H0547: 1, H0670: 1,<br>L0743: 1, L0744: 1,<br>L0747: 1 and L0592: 1 | S0358: 11, L0777: 9, H0046: 8, L0439: 6, L0759: 6, L0438: 5, L0662: 4, L0794: 4, L0766: 4, S0114: 3, L0789: 3, H0144: 3, S0126: 3, L0748: 3, S0011: 3, S0196: 3, H0628: 2, H00250: 2, H0024: 2, H0050: 2, L0667: 2, L0809: 2, L0663: 2, L0665: 2, S0328: 2, L0665: 2, L0665: 2, L066 |
|  | Asn-41 to Lys-46,<br>Pro-73 to Lys-92.  |  |
| ·  | 2704  | 2705   |
|  | 673 - 1008  | 255 - 2063   |
|  | 529   | 530  |
|  | 1017374   | 1017461  |
|  | HNTSV21   | HNORH33  |

|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                      | 100650,               | 100650,               |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------------------|-----------------------|
|                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        | 12q24.2-              | q24.3                 |
| S0402: 1, S0212: 1, | S0348: 1, S0356: 1, | S0442: 1, S0360: 1, | S0222: 1, H0431: 1, | H0486: 1, H0599: 1, | H0581: 1, L0471: 1, | L0163: 1, H0201: 1, | S0051: 1, H0375: 1, | S0214: 1, H0553: 1, | L0142: 1, L0143: 1, | H0032: 1, L0455: 1, | H0090: 1, H0591: 1, | H0063: 1, H0551: 1, | H0623: 1, T0041: 1, | T0042: 1, H0561: 1, | H0714: 1, H0509: 1, | H0633: 1, L0637: 1, | L0761: 1, L0800: 1, | L0768: 1, L0650: 1, | L0378: 1, L0655: 1, | L0666: 1, H0691: 1, | H0435: 1, H0658: 1, | H0651: 1, L0744: 1, | L0750: 1, L0757: 1, | L0758: 1, L0591: 1, | L0599: 1, L0362: 1, | S0242: 1, H0542: 1, | H0543: 1 and H0422: 1. | S0276: 34, S0360: 25, | L0666: 25, L0665: 14, |
|                     |                     |                     |                     | :                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                        |                       |                       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | <del></del>         |                     | ·                      | 2706                  |                       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | •                   | , ,                 |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                        | 162 - 2159            |                       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 531                   |                       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1017565               |                       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                        | HUFEF35               |                       |

|                       |                      |                     |                     |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     | -                    |                     |
|-----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|
|                       |                      | _                   |                     |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
| 142410,               | 142410,              | 142410,             | 50781,              | 181405.             |                     |                     |         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
| <u> </u>              | <u></u>              | <u>1</u>            | <u> </u>            | <u> </u>            |                     |                     | <u></u> |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                      |                     |
|                       |                      |                     |                     |                     | •                   | •                   |         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
|                       |                      | <del>-:</del>       |                     | :                   |                     |                     |         |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
| ks: 13,               | 53: 9,               | ∞<br>•              | %<br>%              | 0:7,                | 6: 6,               | 9: 6,               | 5: 6,   | 8: 5,               | 2:5,                | 7:5,                | 9:5,                | 5: 4,               | 8: 4                | 1: 4,               | 0: 4,               | 4.                  | 6: 4,               | 6: 4,               | 2: 4,               | 6:3,                | j. 3,               | 33,                 | 6:3,                |                     |                     |                     | 0:3,                | 1: 3,                | 5: 3,               |
| , L07                 | , H05                | T066                | H065                | L050                | H048                | H065                | S040    | H031                | H041                | T065                | H051                | H068                | S035                | H003                | S044                | S037                | 690H                | L059                | H054                | H068                | S035(               | S0408               | H004                | H032                | H003                | S045                | L052                | L052                 | L037                |
| S0194: 14, L0748: 13, | .0662: 12, H0553: 9, | .0663: 9, L0664: 8, | H0547: 8, H0658: 8, | H0506: 8, L0500: 7, | .0659: 7, H0486: 6, | .0526: 6, H0659: 6, | 772: 6, | S0434: 6, H0318: 5, | 10428: 5, H0412: 5, | .0653: 5, L0657: 5, | .0517: 5, H0519: 5, | H0170: 4, H0685: 4, | H0657: 4, S0358: 4, | 10083: 4, H0031: 4, | 10551: 4, S0440: 4, | .0770: 4, S0374: 4, | 30328: 4, H0696: 4, | H0445: 4, L0596: 4, | ,0608: 4, H0542: 4, | H0624: 3, H0686: 3, | 36024: 3, S0356: 3, | S0354: 3, S0408: 3, | H0581: 3, H0046: 3, | H0510: 3, H0328: 3, | H0644: 3, H0038: 3, | 10067: 3, S0450: 3, | .0598: 3, L0520: 3, | .0646: 3, L.0521: 3, | .0768: 3, L0375: 3, |
| S01                   | 907                  | <u>8</u>            | HOS                 | H05                 | 907                 | 1.05                | HOE     | 8<br>8              | H04                 | 907                 | <u> 10</u>          | H                   | HOH                 | HO                  | HO                  | <u> 1</u>           | 803                 | H04                 | 907                 | HO                  | <u>S</u>            | <u>S</u> 03         | HO                  | H                   | HO                  | <u>1</u>            | 105                 | <u>5</u>             | 5                   |
|                       |                      |                     |                     | •                   |                     |                     |         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
|                       |                      |                     |                     |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
|                       |                      |                     |                     |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                      |                     |
| <u> </u>              |                      | •                   | ,                   |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
|                       |                      | •                   |                     | <u> </u>            |                     |                     |         |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      | •                   |
|                       |                      |                     |                     |                     |                     |                     |         | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
|                       |                      |                     | · · · ·             | •                   |                     |                     |         |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
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|                       | •                    |                     |                     |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
|                       |                      |                     |                     | <del></del>         |                     |                     |         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     | •                    |                     |
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|---------------------|---------------------|----------|---------------------|---------------------|----------|-------|--------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------|-------|---------------------|---------------------|--------------------|--|---------------------|---------------------|---------------------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|
|                     |                     |          |                     | •                   |          |       |        |                     |                     |                     |                     |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     |                    |
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| L                   |                     |          |                     |                     |          |       |        |                     |                     |                     |                     |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          | _                   |                     |                     |                     |                     |                    |
|                     |                     |          |                     | ٠                   |          |       |        |                     |                     |                     |                     |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     |                    |
|                     |                     |          |                     | :                   |          |       |        |                     |                     |                     |                     |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     |                    |
| -                   |                     |          |                     |                     |          |       |        |                     |                     |                     |                     |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     |                    |
| 3,                  | پ                   | 3,       | ຕົ                  | H0543: 3, S0114: 2, | ર્લ      | 4,    | 2,     | 7,                  | 2,                  | 4                   | ري<br>ر             | 2,                  | 4                   | ζ,        | ر     | 2,                  | 2,                  | ત્                 | ณ์   | 4                   | ર્લ                 | 4                   | 2,       | 2,                  | <del>_</del>        | <u>_</u>            | 1,                  | 1,                  | 1,                 |
| .0655: 3, L0493: 3, | S0126: 3, H0521: 3, | 754:     | .0757: 3, L0588: 3, | 114:                | 442:     | 717:  | 090    | .0040: 2, L0471: 2, | H0266: 2, H0687: 2, | H0165: 2, H0068: 2, | H0413: 2, T0041: 2, | H0560: 2, H0509: 2, | S0210: 2, L0369: 2, | L0637: 2, | 775:  | .0776: 2, L0527: 2, | .0656: 2, L0518: 2, | 0519: 2, H0520: 2, | 10435: 2, S0330: 2,                            | H0539: 2, H0704: 2, | 10436: 2, L0751: 2, | .0747: 2, L0752: 2, | 605:     | .0599: 2, L0595: 2, | .0362: 2, L0448: 1, | S0342: 1, T0049: 1, | S0134: 1, H0650: 1, | .0760: 1, S0212: 1, | 3664               |
| 3,12                | 3, H0               | 3,12     | 3,12                | 3,50                | 2, \$0   | 2, LC | 2, TO  | 2, L0               | 2, H(               | 2, H(               | 2, TC               | 2, H(               | 2,10                | 2, 1.0    | 2, 10 | 2, 1.0              | 2, 10               | 2, HC              | 2, SC  | 2, H(               | 2,10                | 2, L0               | 2, 1.0   | 2, L0               | 2, IC               | 1, T0               | 1, HC               | 1, S0               | 1, H(              |
| 555                 | 26:3                | 139:     | 157:                | 543:                | 993:     | 580:  | 222: 2 | 740:                | 266:                | 165:                | 413:                | 560:                | 210: 3              | 0638: 2,  | 36.   | :911                | 556:                | 519:               | 435:   | 539:                | 436:                | 747:                | 589:     | 599:                | 362:                | 342:                | 134:                | 760:                | H0661: 1, H0664: 1 |
| 100                 | S01                 | <u>8</u> | 9                   | <u>H</u>            | <u>H</u> | )H    | S02    | <u> </u>            | HOH                 | 유                   | È                   | Ê                   | S02                 | <u>Š</u>  | 0     | 2                   | <u> </u>            | <u>Š</u>           | Ë  | 9                   | <u>£</u>            | 3                   | <u> </u> | Š                   | 0                   | S0.                 | S0                  | <u>e</u>            | 丑                  |
|                     |                     |          |                     |                     |          |       |        |                     |                     |                     |                     |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     |                    |
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|                     |                     |          |                     | •                   |          |       |        |                     |                     |                     |                     |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     |                    |
|                     |                     |          |                     | . ,                 |          |       |        |                     |                     |                     |                     |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     |                    |
| L                   |                     |          | _                   |                     |          |       |        |                     |                     |                     | ٠.                  |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     |                    |
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|                     |                     |          |                     | ·                   |          |       |        |                     |                     |                     |                     |                     |                     |           | •     |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     |                    |
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| <u> </u>            |                     |          |                     |                     |          |       |        |                     |                     |                     |                     |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     | _                  |
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|                     |                     |          |                     | •                   |          |       |        |                     |                     |                     |                     |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     |                    |
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|                     |                     |          |                     |                     |          |       |        |                     |                     |                     |                     |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     |                    |
| L                   |                     |          |                     |                     |          |       |        |                     |                     |                     |                     |                     |                     |           |       |                     |                     |                    |  |                     |                     |                     |          |                     |                     |                     |                     |                     |                    |

| Nodes 1, 140375. 1, 140329. 1, 140375. 1, 140329. 1, 140337. 1, 140329. 1, 140337. 1, 140329. 1, 140337. 1, 140329. 1, 140337. 1, 140338. 1, 140339. 1, 140339. 1, 140339. 1, 140339. 1, 140339. 1, 140339. 1, 140339. 1, 140339. 1, 140339. 1, 140339. 1, 140339. 1, 140339. 1, 140339. 1, 140338. 1, 140339. 1, 14   |                 |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          | -        |            |       |      |
|--|-----------------|--|-------|--------------|------------|------------------|-------|-------|----------|-------------|-------------|-------|-------|-------|-------|------------|----------|-------|----------|-------|------|----------|-------|----------|----------|------------|-------|------|
|  |                 |  |       |              |            | 4                |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
|  | •               |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
| H04493; 1, 140637; 1, 140439; 1, 140637; 1, 140437; 1, 140437; 1, 140437; 1, 140437; 1, 140437; 1, 140437; 1, 140437; 1, 140437; 1, 140432; 1, 140642; 1, 140642; 1, 140642; 1, 140643; 1, 140642; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 140643; 1, 160643; 1,  |                 |  |       | ś            |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
| NOGA41, 1, 10637: 1, 10739; 1, 10339   |                 |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
| Nod44: 1, 10637: 1, 10329:   |                 |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
| H0442: 1, 803/02, 1, 8   | <del> </del>    |  |       |              |            | ·                |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
| H0449; 1, 803 76;  80444; 1, H0637;  H0329; 1, H0359;  H0431; 1, H0369;  H0431; 1, H0369;  H0431; 1, H0445;  H0643; 1, H0642;  H0643; 1, H0643;  H0648; 1, H0673;  H0610; 1, H0674;  H0610; 1, H0674;  H0610; 1, H0677;  H0610; 1, H0677;  H0610; 1, H0677;  H0610; 1, H0677;  H0610; 1, H0677;  H0610; 1, H0677;  H0629; 1, L0679;  L0630; 1, L0772;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L076;  L0620; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0773;  L0649; 1, L0799;  L0652; 1, L0899;  L0652; 1, L0   | - <del>-</del>  | <u>,                                    </u> | .T,   | <u>.</u> ; . | -f -:      | , <sub>1</sub> , | ÷     | l,    | 1,       | ۲,          |             | 1,    | 7,    | ,     | L,    | 1,         | 1,       | 1,    | ۲,       | I,    | ۲,   | Ι,       | l,    | Ţ,       | 1,       | <b>T</b> , | 1,    | 1,   |
| H0449; 1, NO H0437; 1, H0 H0437; 1, H0 H0431; 1, H0 H0431; 1, H0 H0431; 1, H0 H0431; 1, H0 H0431; 1, H0 H0643; 1, L0 H0643; 1, L0 H0643; 1, H0 H0643; 1, H0 H0643; 1, H0 H0643; 1, H0 H0643; 1, H0 H0648; 1, H0 H0648; 1, H0 H0648; 1, H0 H0648; 1, L0 H0648; 1, L0 L0630; 1, L0 L0630; 1, L0 L0649   | 376:<br>637:    | 351:   | 369:  | 455:         | 586:       | 575:             | 235:  | 545:  | 51:      | 375:        | 483:        | 617:  | 674:  | 040   | 087:  | 059:       | 494:     | 464:  | 633:     | 002:  | 451: | :199     | 772:  | 773:     | 766:     | 381:       | 497:  | 803: |
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| 204<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>1  | <del>3</del> 4. | 29:  | 137:  | 131:         | 86.<br>53. | 13:              | 48: 1 | .96   | 63: 1    | 10:1        | 23: 1       | 528:  | :99   | .80   | 516:  | 188:       | 39:1     | :192  | 38: 1    | 747   | :629 | 01: 1    | 30: 1 | 74:      | .84      | .64        | . :66 | .75  |
|  | 9H 8            | H03  | H04   | E G          | E P        | E                | 100   | H05   | <u> </u> | <u>T</u> 00 | <u>T</u> 00 | HO    | H0    | H0,   | HO    | <u>H</u> 0 | <u> </u> | HO    | <u>S</u> | HOH   | H0.  | <u>S</u> | 100   | <u> </u> | <u>3</u> | 2          | 2     | 5    |
|  |                 |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
|  |                 |  |       | •            |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
|  |                 |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          | •     |          |       |      |          |       | •        |          |            |       | -    |
|  |                 |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
|  |                 |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          | _          |       | -    |
|  | :               |  |       | :            |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
|  |                 |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
|  |                 |  |       | •            |            |                  |       |       |          |             |             |       |       |       |       |            |          |       | •        |       |      |          |       |          |          |            |       |      |
|  |                 |  |       |              |            |                  |       | —     |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
|  |                 |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
|  |                 |  |       | •            |            |                  |       |       |          |             |             |       |       | ,     |       | _          |          |       |          |       |      |          |       |          |          |            |       |      |
|  |                 |  |       |              |            |                  |       |       | •        |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
|  |                 |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
|  | <del></del>     |  |       | •            |            |                  |       |       |          | _           |             | -     |       |       |       |            |          |       |          |       |      | -        |       |          |          |            |       |      |
|  |                 |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          |       |          |          |            |       |      |
|  |                 |  |       |              |            |                  |       |       |          |             |             |       |       |       |       |            |          |       |          |       |      |          | •     |          |          |            |       |      |

|                     |                     |                     |          |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |
|---------------------|---------------------|---------------------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|
| .0650: 1, L0774: 1, | .0651: 1, L0654: 1, | .0513: 1, L0558: 1, |          | .0384: 1, L0383: 1, | .0382: 1, L0528: 1, | .0647: 1, L0792: 1, | H0144: 1, S0296: 1, | 70068: 1, S0148: 1, | .0438: 1, L0352: 1, | H0689: 1, H0690: 1, | H0682: 1, H0684: 1, | H0666: 1, H0651: 1, | S0380: 1, L0602: 1, | H0710: 1, H0522: 1, | 10694: 1, S0404: 1, | H0478: 1, H0631: 1, | S0028: 1, L0742: 1, | .0749: 1, L0750: 1, | .0779: 1, L.0755: 1, | .0758: 1, L0759: 1, | 30031: 1, H0444: 1, | H0707: 1, L0591: 1, | .0592: 1, H0668: 1, | H0665: 1, S0192: 1, | S0242: 1, H0423: 1, | H0422: 1, S0424: 1, | S0460: 1 and S0384: 1. | L0794: 3, L0752: 3, | .0520: 2, L0803: 2, |
|                     |                     |                     | <u> </u> | <u> </u>            |                     |                     |                     |                     |                     | <u> </u>            | <u> </u>            |                     | <u> </u>            | <u> </u>            |                     |                     | <u> </u>            | <b>.</b>            |                      |                     |                     |                     |                     | <u> </u>            |                     |                     | <u> </u>               | Ser-19 to Arg-24.   |                     |
|                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     | ,                      | 2707                |                     |
|                     |                     |                     |          | ,                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | -                   |                     |                      |                     |                     |                     |                     |                     |                     |                     |                        | 1 - 132             |                     |
|                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                        | 532                 |                     |
|                     |                     |                     | •        |                     | •                   |                     |                     |                     |                     |                     |                     | •                   |                     |                     | •                   |                     |                     |                     |                      |                     |                     |                     | •                   |                     |                     |                     |                        | 1017694             |                     |
|                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     | •                   |                        | HJPCG39             |                     |

|   |                     |                     |                     |                     |                     |                     |                     |                        |                       |                       |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     | •                   |                     | -                   |                     |                     |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   | •                   |                     | ,                   |                     |                     |                     |                     |                        |                       |                       |                     |                     |                     |                     |                     | _                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0776: 2, L0666: 2,<br>1.0665: 2, 1.0758: 2 | L0759: 2, H0392: 1, | H0581: 1, L0471: 1, | H0083: 1, H0687: 1, | S0003: 1, L0769: 1, | L0639: 1, L0648: 1, | L0375: 1, L0657: 1, | L0659: 1, L0518: 1, | H0659: 1 and L0777: 1. | L0766: 25, L0439: 20, | L0438: 16, L0758: 11, | L0747: 9, L0731: 9, | L0794: 8, L0805: 8, | L0748: 8, L0752: 7, | L0759: 7, H0038: 6, | L0769: 6, L0809: 6, | 1.0750: 6, 1.0777: 6, | L0757: 6, L0592: 6, | L0770: 5, L0803: 5, | L0749: 5, L0593: 5, | H0581: 4, L0774: 4, | L0776: 4, H0435: 4, | H0521: 4, L0740: 4, | L0754: 4, H0305: 3, | S0418: 3, H0013: 3, | H0318: 3, S0003: 3, | H0616: 3, H0412: 3, | H0413: 3, S0422: 3, | L0800: 3, L0771: 3, |
|   |                     |                     |                     |                     |                     |                     |                     |                        | Pro-2 to Leu-8,       | Phe-12 to Arg-20,     | Thr-32 to Lys-38.   |                     |                     |                     |                     |                       | -                   |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                     |                     |                     |                     |                     |                     |                     |                        | 2708                  |                       |                     |                     |                     |                     |                     |                       |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                     |                     |                     |                     |                     | ·                   |                     |                        | 748 - 924             |                       |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                     |                     |                     |                     |                     |                     |                     |                        | 533                   |                       |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                     |                     |                     |                     |                     |                     |                     |                        | 1017772               | ,                     |                     |                     |                     |                     |                     |                       |                     |                     | ,                   |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |
|   |                     |                     |                     |                     |                     |                     |                     |                        | HISBM03               |                       |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | 0. <del>000</del> . |                     |                     | <u> </u>            |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |
| <br>                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     | · <u>-</u>          |                     |                     |                     |                     |
| J0775: 3, L0789: 3, | .0791: 3, L0665: 3, | H0539: 3, L0744: 3, | .0745: 3, L0595: 3, | S0026: 3, H0556: 2, | H0717: 2, S0116: 2, | S0045: 2, S0046: 2, | S0476: 2, H0586: 2, | H0574: 2, S0010: 2, | S0049: 2, H0052: 2, | H0620: 2, H0687: 2, | H0553: 2, L0455: 2, | S0366: 2, H0090: 2, | H0591: 2, H0494: 2, | S0150: 2, L0761: 2, | .0772: 2, L0381: 2, | .0807: 2, L0518: 2, | .0666: 2, H0519: 2, | H0648: 2, S0328: 2, | S0330: 2, S0152: 2, | .0743: 2, L0751: 2, | .0756: 2, L.0779: 2, | .0753: 2, L0755: 2, | S0436: 2, L0605: 2, | .0362: 2, H0668: 2, | H0170: 1, H0171: 1, | H0265: 1, T0002: 1, | 00049: 1, H0650: 1, | H0662: 1, L0005: 1, | S0356: 1, S0442: 1, |
| T07.                | L079                | H05                 | L07                 | 2005                | H07                 | 200 <del>5</del>    | S04.                | H05                 | 800 <sub>5</sub>    | 90H                 | H05                 | 803                 | H05                 | S01:                | 107                 | 108                 | 106                 | 90H                 | S03.                | 1.07.               | L07                  | 107                 | S04.                | <u>1</u> 03(        | H01                 | H02                 | T00                 | 90H                 | S03.                |
|                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | • ·                 |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |
| <br>                |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     | · <del>·</del>      |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     | <i></i>             |                     |                     |
|                     | <del></del>         |                     |                     | •                   |                     |                     | . <del></del>       |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                      | ,                   | <del></del>         | ,                   |                     |                     |                     |                     |                     |
|                     |                     | <del>.</del>        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     | <del>.</del>        |                     |                     | *·-                  | -*                  |                     |                     |                     | البواد د.           |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |

|                  |                  |                  |           |                  |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  | _                |                  |                  |                  |                   |                  |                     |              |
|------------------|------------------|------------------|-----------|------------------|----------------|-----------|------------------|--------|------------------|------------------|-----------|------------------|-----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|---------------------|--------------|
|                  |                  |                  |           |                  |                |           |                  |        | ٠                |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
| i                |                  |                  |           |                  |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     | ٠            |
|                  |                  |                  |           |                  |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  |                  | ,         | •                |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  | ٠                |                  |                  |                  |                  |                  |                   |                  | •                   | !            |
|                  | •                |                  |           |                  |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  | :                   |              |
|                  |                  |                  | •         |                  | _              |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  | _                |                  |                  |                  |                   |                  |                     |              |
|                  | 1,               | 1,               | Ι,        | Į,               | <del>بــ</del> | Ę,        | 1,               | T,     | T,               | T,               | 1,        | T,               | 1,        | 1,               | ÷                | 1,               | 1,               | <b>,</b>         | 1,               | 1,               | <u>.</u>         |                  |                  | · <del>- í</del> | ·i               | 1,                | 1,               | 1,                  | 1,           |
| 08: 1            | H0580: 1, H0733: | 519:             | :193      | 642:             | 559:           | l, H0156: | H0274: 1, H0196: | H0327: | H0530: 1, H0046: | 10123: 1, H0050: | 1, H0049: | H0024: 1, H0014: | 51:       | 70010: 1, H0083: | 10594: 1, H0615: | 10688: 1, H0031: | .0142: 1, H0111: | 212:             | 433:             | 342:             | 138: ]           | .08: 1           | . 69             | ./90             | 76               | .0773: 1, L.0768: | :956             | .0659: 1, L0783: 1, | L0787:       |
| S0358: 1, S0408: | , HO             | S0132: 1, H0619: | l, H0261: | H0600: 1, H0642: | , H0559:       | , НО      | , НО             | , HO   | ,<br>HÖ          | , HO             | ,<br>HO   | , HO             | , \$0051: | , HO             | HO,              | , HO             | , HO             | H0032: 1, H0212: | 70067: 1, H0433: | H0100: 1, T0042: | .0475: 1, S0438: | S0142: 1, S0208: | S0002: 1, L0369: | , L0667:         | .0646: 1, L0764: | ,107              | .0650: 1, L0656: | 1.07                |              |
| 8: 1,            | 80: 1            | 12: 1,           | 50278: 1, | 00:1             | 40632: 1       | H0486: 1  | 74: 1            | 96: 1  | 30:1             | 23: 1            | H0012: 1  | 24: 1            | H0015: 1  | 10:1             | 94: 1            | 88: 1            | 12: 1            | 32: 1            | 57: 1            | 00:1             | 75: 1            | 12: 1            | 2:1              | 0763: 1          | 46: 1            | 73: 1             | 50:1             | 59: 1               | .0367: 1,    |
| 303              | H05              | S013             | S027      | 90H              | 90H            | H04       | H02              | H0596: | H05              | H01              | 00H       | 100H             | 00H       | 100              | H05              | 90H              | 707              | H00              | <u>100</u>       | H01              | <u>7</u>         | <b>S01</b>       | <u> </u>         | 107              | 1.06             | 107               | 907              | 907                 | <u> </u>     |
|                  |                  |                  |           |                  |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  |                  |           |                  |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  |                  |           |                  |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  |                  |           |                  |                |           |                  | :      |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
| <br>             | ·                |                  |           | _                |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  |                  |           |                  |                |           | •                |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  |                  |           |                  |                |           |                  | _      | _                |                  |           |                  |           |                  |                  |                  | <del>-</del>     |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  | _                   |              |
|                  |                  |                  |           |                  |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  | •                |                  |                  |                   |                  | ì                   |              |
| _                |                  |                  |           | •                |                |           |                  |        |                  |                  |           |                  | <u></u>   | _                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  |                  |           |                  |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  |                  |           |                  |                |           |                  |        |                  |                  |           | <del></del>      |           |                  |                  |                  |                  |                  | _                |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  | •                |           |                  |                |           |                  |        |                  |                  |           | ٠                |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  |                  |           |                  |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  |                  |           | :                |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  | —                |                  |                  |                  |                  |                   |                  |                     | <del>.</del> |
|                  |                  |                  |           |                  |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  |                  |           |                  |                |           |                  |        |                  |                  |           |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |
|                  |                  |                  |           |                  |                |           |                  |        |                  |                  | ,,        |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                     |              |

|  |   | 116600,<br>120550,<br>120570,<br>120575,<br>130500,<br>133200,<br>171760,   |
|--|---|---|
|  |   | 1p36.1  |
| L0790: 1, L0792: 1,<br>L0663: 1, H0144: 1,<br>L0352: 1, H0547: 1,<br>S0126: 1, H0658: 1,<br>H0670: 1, H0696: 1,<br>H0134: 1, S0406: 1,<br>H0626: 1, S3012: 1,<br>S0390: 1, L0786: 1,<br>H0595: 1, S0434: 1,<br>L0599: 1, H0653: 1,<br>H0667: 1, S0192: 1,<br>H0542: 1, S0042: 1 and<br>S0424: 1. | Ala-15 to Asp-26, AR089: 17, AR039: Phe-108 to Trp-113, 16, AR096: 16, AR053: Glu-167 to Tyr-175. 16, AR052: 13, AR033: 12, AR060: 11, AR055: 8, AR104: 7, AR061: 6 H0415: 1 and H0414: | L0740: 21, L0748: 14,<br>L0731: 10, L0747: 9,<br>L0752: 9, L0757: 7,<br>H0674: 6, L0750: 6,<br>S0358: 5, L0768: 5,<br>L0809: 5, H0648: 5,<br>L0779: 5, H0318: 4,<br>L0766: 4, L0776: 4, |
|  | Ala-15 to Asp-26,<br>Phe-108 to Trp-113,<br>Glu-167 to Tyr-175.   |   |
|  | 2709  | 2710  |
|  | 2 - 559   | 587 - 429   |
|  | 534   | 535   |
|  | 1017801   | 1017825   |
|  | HOFAA79   | HPRAJ96   |

| 185470,             | 255800,             | 600975              |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | 1-                  |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| H0402: 3, H0486: 3, | H0617: 3, L0662: 3, | .0775: 3, L0375: 3, | .0754: 3, H0543: 3, | H0170: 2, H0686: 2, | H0125: 2, S0360: 2, | S0222: 2, H0333: 2, | 10060: 2, H0250: 2, | H0156: 2, H0263: 2, | H0123: 2, H0024: 2, | .0483: 2, H0644: 2, | H0090: 2, H0551: 2, | H0412: 2, L0763: 2, | .0772: 2, L0803: 2, | .0774: 2, L0805: 2, | .0659: 2, L0783: 2, | ,0543: 2, S0126: 2, | H0435: 2, H0672: 2, | .0751: 2, L0777: 2, | .0758: 2, L0759: 2, | H0444: 2, L0599: 2, | ,0604: 2, S0194: 2, | H0423: 2, H0422: 2, | H0352: 2, H0624: 1, | H0295: 1, S0114: 1, | 70049: 1, H0650: 1, | H0657: 1, H0638: 1, | .0005: 1, S0376: 1, | S0410: 1, H0637: 1, | S0045: 1, S0046: 1, |
| H0402               | H0617               | L0775:              | L0754:              | H0170               | H0125               | 80222:              | T0060:              | H0156               | H0123               | [L0483:             | 0600H               | H0412               | . L0772:            | L0774:              | 106590T             | L0543:              | H0435               | L0751:              | L0758               | H044                | L0604               | H0423               | H0352               | H0295               | T0049               | H0657               | [T0002              | 80410               | 80045               |
|                     | ·-                  |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| S0132: 1, S0278: 1, | H0431: 1, T0040: 1, | T0109: 1, H0069: 1, | L0021: 1, H0042: 1, | H0575: 1, S0346: 1, | S0474: 1, H0251: 1, | H0085: 1, T0115: 1, | S0050: 1, S0051: 1, | H0083: 1, H0356: 1, | H0266: 1, H0188: 1, | H0428: 1, H0032: 1, | H0169: 1, H0591: 1, | H0634: 1, H0063: 1, | T0067: 1, H0272: 1, | H0413: 1, S0038: 1, | H0100: 1, H0641: 1, | S0142: 1, S0344: 1, | H0538: 1, H0695: 1, | L0371: 1, L0637: 1, | L0646: 1, L0764: 1, | L0648: 1, L0794: 1, | L0653: 1, L0526: 1, | L0782: 1, L0666: 1, | L0663: 1, L0665: 1, | S0428: 1, H0520: 1, | H0659: 1, H0670: 1, | H0651: 1, S0328: 1, | L0602: 1, H0518: 1, | H0696: 1, S3014: 1, | S0027: 1, L0749: 1, |
|                     |                     |                     | -                   |                     | <u> </u>            |                     | <del>-</del> A      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     |                     | -                   |                     |                     |                     | <u> </u>            |                     | -                   | -                   |                     |                     |                     | <del>:</del>        | · <del>-</del>      | - <del></del> -     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |
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| L0588: 1, L0591: 1,<br>L0593: 1, S0026: 1 and | 50384: 1. | H0549: 5, L0769: 5, | L0157: 4, L0742: 3, | S0010: 2, H0620: 2, | S0051: 2, H0617: 2, | H0483: 1, H0661: 1, | S0420: 1, S0045: 1, | H0411: 1, H0550: 1, | H0370: 1, H0438: 1, | H0434: 1, H0545: 1, | H0615: 1, S0112: 1, | H0494: 1, L0770: 1, | L0364: 1, L0783: 1, | L0809: 1, L0666: 1, | H0547: 1, H0682: 1, | H0672: 1, L0779: 1, | L0758: 1 and L0592: 1. | H0694: 92, L0747: 14, | L0766: 13, L0764: 7, | S0126: 7, L0439: 7, | L0758: 7, L0759: 7, | H0657: 6, H0656: 6, | S0358: 6, H0266: 6,                     | L0763: 6, L0776: 6, |                     | L0777: 6, L0752: 6, | H0445: 6, H0486: 5, |
|   |           |                     | Pro-9 to Pro-16,    | Pro-34 to Leu-41.   |                     |                     |                     |                     |                     |                     | -,                  |                     |                     |                     |                     |                     |                        | Arg-8 to Gly-17,      | Gly-29 to Pro-45,    | Arg-62 to Leu-84,   | -                   | Glu-103 to Val-114, | Gln-141 to Cys-153, 80358: 6, H0266: 6, | Ile-162 to Glu-180, | Arg-186 to Lys-211, | 228.                |                     |
|   |           | 2711                |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2712                  |                      |                     |                     |                     |   |                     |                     |                     |                     |
| ·   |           | 1 - 123             |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 14 - 745              |                      |                     |                     |                     |   |                     | ,                   |                     |                     |
|   |           | 536                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 537                   |                      |                     |                     |                     |   |                     |                     |                     |                     |
|   |           | 1018032             |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                        | 1018080               | i                    |                     |                     |                     |   |                     |                     |                     |                     |
|   |           | HBXFX71             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HMVDD81               |                      |                     |                     |                     |   |                     |                     |                     |                     |

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| .5,                 | .5,                 | ς,                  | 5,   | 4,                  | 4,                  | 4,                  | 4,                  | 4,                  | 4,                  | 4,                  | 4,                  | 3,                  | 3,                  | .3,                 | : 3,                | .3,                 | 3,                  | က်   | 3,                  | 3,          | ઌ૾                  | 5,                  | 4                   | 2,                  | 2,                  | 2,                  | 2,                  | 2,                  | 4         |
| )622                | )623                | 805:                | 749  | 476:                | 3036                | 598:                | 999                 | 809:                | 44[                 | 9658                | 434                 | 717                 | 44.                 | 2007                | 3615                | )551                | 0770                | 657: | 374:                | 330         | 436:                | 3738                | 341                 | 360                 | 045                 | 717                 | 414                 | 280                 | S0010:    |
| H0013: 5, H0622: 5, | H0038: 5, H0623: 5, | .0649: 5, L0805: 5, | 10547: 5, L0749: 5,                          | .0750: 5, S0476: 4, | H0497: 4, H0036: 4, | S0422: 4, L0598: 4, | H0529: 4, L0662: 4, | .0775: 4, L0809: 4, | .0663: 4, H0144: 4, | 10659: 4, H0658: 4, | H0521: 4, S0434: 4, | .0581: 4, H0717: 3, | S0212: 3, S0444: 3, | HO574: 3, H0004: 3, | HO328: 3, H0615: 3, | H0644: 3, H0551: 3, | H0494: 3, L0770: 3, | 3,13 | J0665: 3, S0374: 3, | 3, SC       | .0731: 3, S0436: 3, | H0265: 2, H0738: 2, | S0116: 2, H0341: 2, | H0638: 2, S0360: 2, | H0580: 2, S0045: 2, | H0393: 2, L0717: 2, | H0549: 2, S0414: 2, | H0485: 2, S0280: 2, | 2, S(     |
| 13:                 | 38: 4               | 49:5                | 47:  | 50: 5               | 7:16                | 22: 4               | 29: 7               | 75: 4               | 63: 4               | 59:                 | 21:                 | 81: 4               | 12: 3               | 74:                 | 28:                 | 4                   | 46                  | 68:  | 65: 3               | .02         | 31: 3               | .65:                | 16:2                | 38:                 | :08                 | 93:                 | .64                 | 85:                 | H0156: 2, |
| H00                 | HOOH                | 106                 | HOS  | 107                 | H04                 | <b>S</b> 04         | H05                 | 107                 | 106                 | )H06                | H05                 | 1.05                | <b>S02</b>          | H05                 | H03                 | H06                 | H04                 | 507  | <u> </u>            | HOG         | 1.07                | H02                 | <b>S</b> 01         | H06                 | H05                 | H03                 | H05                 | H04                 | <u>된</u>  |
|                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |      |                     |             |                     |                     |                     |                     |                     |                     |                     |                     |           |
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|                    |                     |                      |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                  | <del></del>        |                  |                  |                  |                  |            | <u>, , , , , , , , , , , , , , , , , , , </u> |                     |                  |                  |                  |                  |                  | _                |
| <br>               |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                    |                  |                  | <del></del>      |                  |            |   |                     |                  |                  |                  | _                |                  | _                |
| 740: 2,            | )667: 2,            | 7774: 2,             | 518: 2,             | 3682: 2,            | 0539: 2,            | )518: 2,            | 044: 2,             | )555: 2,            | 3744: 2,            | 757: 2,             | )608: 2,            | 3653: 2,            | 276: 2,             | 0423: 2,            | 411: 1,          | 0170: 1,           | 0220: 1,         | 0685: 1,         | 049: 1,          | 0650: 1,         | 0255: 1,   | 442: 1,                                       | 408: 1,             | 0132: 1,         | 0437: 1,         | 1222: 1,         | 0592: 1,         | 0333: 1,         | 0105: 1,         |
| H0032: 2, S0440: 2 | H0646: 2, L0667: 2, | .0646: 2, L.0774: 2, | .0652: 2, L0518: 2, | .0438: 2, H0682: 2, | H0660: 2, H0539: 2, | S0380: 2, H0518: 2, | H0696: 2, S0044: 2, | S0406: 2, H0555: 2, | H0436: 2, L0744: 2, | .0751: 2, L0757: 2, | .0592: 2, L0608: 2, | .0593: 2, H0653: 2, | S0194: 2, S0276: 2, | H0543: 2, H0423: 2, | 30424: 2, L0411: | H0624: 1, H0170: 1 | H0556: 1, H0220: | H0686: 1, H0685: | S0114: 1, T0049: | H0583: 1, H0650: | 0254: 1, H | S0356: 1, S0442:                              | S0354: 1, S0408: 1, | H0722: 1, S0132: | H0619: 1, H0437: | S6022: 1, S0222: | H0431: 1, H0592: | H0586: 1, H0333: | H0349: 1, L0105: |
| 臣                  | 茁                   | <u> </u>             | <u> </u>            | <u> </u>            | 王                   | S                   | Ħ                   | S                   | 互                   | <u> </u>            | <u>⊐</u>            | <u> </u>            | <u>x</u>            | Ē                   | <u>X</u>         | <u> </u>           | 耳                | Ï                | <u>8</u>         | 耳                | <u> </u>   | <u>x</u>                                      | <u>x</u>            | I                | 耳                | <u>×</u>         | 王                | H                | H                |
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|                    | <u></u>             |                      |                     |                     |                     |                     |                     |                     |                     | .—.                 |                     |                     |                     |                     |                  |                    |                  |                  |                  |                  |            |   | _                   |                  |                  |                  |                  |                  |                  |
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| T0048: 1, H0581: 1, | H0421: 1, H0374: 1, | H0204: 1, H0046: 1, | H0123: 1, H0081: 1, | H0050: 1, L0471: 1, | H0023: 1, H0355: 1, | H0687: 1, S0250: 1, | H0688: 1, H0029: 1, | H0039: 1, L0483: 1, | T0006: 1, H0553: 1, | L0055: 1, H0169: 1, | H0124: 1, H0068: 1, | H0316: 1, H0591: 1, | H0616: 1, H0264: 1, | H0268: 1, H0412: 1, | H0413: 1, H0056: 1, | H0059: 1, T0042: 1, | S0016: 1, H0561: 1, | S0438: 1, H0509: 1, | S0150: 1, H0641: 1, | S0142: 1, S0344: 1, | S0002: 1, S0426: 1, | L0371: 1, L0761: 1, | L0644: 1, L0771: 1, | L0521: 1, L0794: 1, | L0389: 1, L0533: 1, | L0803: 1, L0804: 1, | L0806: 1, L0661: 1, | L0629: 1, L0782: 1, | L0367: 1, L0789: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     | <del>-</del>        | <u>-</u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     | -                   |                     |                     |                     |                     |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                        | 7q32                    |                     |                     |                     |                     |                     |                     |   |   |                     |   |  |   |                     |
| L0793: 1, L0664: 1, | H0520: 1, H0519: 1, | H0593: 1, H0689: 1, | H0672: 1, H0651: 1, | S0378: 1, S0152: 1, | S0350: 1, H0522: 1, | S0013: 1, H0704: 1, | H0576: 1, S0390: 1, | S0027: 1, L0756: 1, | L0779: 1, L0780: 1, | L0755: 1, H0595: 1, | L0596: 1, L0588: 1, | L0589: 1, L0366: 1, | S0011: 1, S0026: 1, | H0665: 1, L0600: 1, | H0008: 1 and H0352: 1. | L0751: 17, L0731: 11, 7 | S0344: 9, S0126: 9, | L0743: 9, L0595: 9, | S0046: 8, S0002: 8, | H0521: 8, L0744: 8, | S0278: 7, S0037: 7, | L0750: 7, S0420: 6, | H0618: 6, H0024: 6,                     | H0188: 6, H0622: 6,                     | S3014: 6, L0439: 6, | H0550: 5, H0620: 5,                     | H0551: 5, H0623: 5,                    | L0659: 5, H0255: 4,                     | S0418: 4, H0052: 4, |
|                     | -                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                        | Pro-18 to Ser-40,       | Pro-81 to Pro-95,   | Pro-111 to Phe-118, | Gly-127 to Ala-132, | Pro-143 to Phe-151, | Pro-164 to Pro-174, | Pro-180 to Lys-187, | Met-205 to Phe-211, H0618: 6, H0024: 6, | Phe-228 to Pro-236, H0188: 6, H0622: 6, | Pro-245 to Pro-255, | Ala-263 to His-270, H0550: 5, H0620: 5, | Gln-272 to Gln-280, H0551: 5, H0623: 5 | Asn-296 to Ala-304, L0659: 5, H0255: 4, | Gly-333 to Gly-344, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2713                    |                     |                     |                     |                     |                     |                     |   |   |                     |   |  | •                                       |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2344 -                  | 1004                |                     |                     | •                   |                     |                     |   |   | •                   |   |  |   |                     |
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|                      |                     |   |   | •                                      |                     |                     |                    |                    |                     |                     |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |           |           |
| -                    |                     |   |   | <u>·</u>                               |                     |                     |                    |                    |                     |                     |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |           |           |
| 4.9                  | 35: 4.              | 12: 4                                   | 58: 4,                                  | 56: 3,                                 | 2: 3,               | 99: 3,              | 48: 3,             | 71:3,              | 94: 3,              | 41:3,               | 16:3,               | 75: 3,              | 49: 3,           | 52: 3,              | 02: 2,              | 62: 2,              | 56: 2,              | 50: 2,              | 93: 2,              | 92: 2,              | 39: 2,              | 50: 2,              | 75: 2,              | 97: 2,              | 45: 2,           | 79: 2,           | 39: 2,           | H0628: 2, | 24: 2,    |
| 2042                 | H04                 | 1074                                    | ,107                                    | , H05                                  | , S021              | , H05               | , T00              | , H02              | , H04               | , НОб               | , L06               | , L07               | ,107,            | ,107,               | , T00               | , H06               | , S03               | , S036              | , H03               | , H05               | , T00               | , H02               | , H05               | , H05               | , H05            | 2, H01           | , H00            | 2, H06    | 2, H0124: |
| S0142-4 S0426-4      | L0663: 4, H0435     | )27: 4                                  | 754: 4                                  | 265: 3                                 | S0040: 3, S0212: 3, | S0045: 3, H0599: 3, | H0253: 3, T0048: 3 | H0266: 3, H0271: 3 | S0250: 3, H0494: 3, | S0440: 3, H0641: 3, | S0144: 3, L0646: 3, | .0662: 3, L0775: 3, | .0809: 3, L0749: | .0777: 3, L0752: 3, | H0542: 3, T0002: 2, | H0295: 2, H0662: 2, | H0306: 2, S0356: 2, | S0442: 2, S0360: 2, | H0580: 2, H0393: 2, | S0222: 2, H0592: 2, | H0559: 2, T0039: 2, | H0013: 2, H0250: 2, | S0280: 2, H0575: 2, | H0581: 2, H0597: 2, | H0544: 2, H0545: | H0046: 2, H0179: | H0252: 2, H0039: | H0030: 2, | H0617: 2, |
| 200                  | 9                   | 0, 800                                  | 3,10                                    | 5. HO                                  | 80                  | S                   | Œ<br>E             | 9                  | 80.                 | <u>8</u>            | 80                  | <u> </u>            | <u> </u>         | 2                   | 丑                   | 윤                   | 윤                   | SÓ                  | 丑                   | 80                  | 요                   | 웊                   | 80                  | 丑                   | 요                | 丑                | 丑                | H         | <u>H</u>  |
| pr.366               | /al-37              | rg-39                                   | iln-42                                  | er 44                                  |                     |                     |                    |                    |                     |                     |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |           |           |
| 3 to S               | 5 to 7              | 1. to A                                 | 8 to C                                  | 8 to S                                 |                     |                     |                    |                    |                     |                     |                     |                     |                  |                     |                     | ,                   |                     |                     |                     | ٠                   |                     |                     |                     |                     |                  |                  |                  |           |           |
| Thr. 353 to Ser. 360 | Gln-365 to Val-379. | Pro-381 to Arg-390, S0027: 4, L0742: 4, | Glu-418 to Gln-423, L0754: 4, L0758: 4, | Leu-438 to Ser-445. H0265: 3, H0556: 3 |                     |                     |                    |                    |                     |                     |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |           |           |
| -                    |                     |   |   | <del></del>                            |                     |                     |                    |                    | •                   | <u> </u>            |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |           | _         |
| L                    |                     |   |   | <u>.</u>                               |                     |                     |                    |                    |                     |                     |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  | _                |           |           |
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| L                    |                     |   |   |  |                     |                     |                    |                    |                     |                     | ,                   |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |           |           |
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|                      |                     |   |   |  |                     |                     |                    |                    |                     |                     |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |           |           |
| -                    |                     |   |   |  |                     | _                   |                    |                    |                     |                     |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |           |           |
|                      |                     |   |   | -                                      |                     |                     |                    |                    |                     | •                   |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |           |           |
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|                     |                     |                     | •                   |                      |                     |                     |                     |                     |                     |                      |                    |                    |                  |                  |                  |                  |                  |                  |                    |                  |                  |            |           |           |                  |                  |           |                    |           |
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| -                   |                     |                     |                     |                      |                     |                     |                     |                     | •                   |                      |                    |                    |                  |                  |                  |                  |                  |                  |                    |                  |                  |            |           |           |                  | •                |           |                    |           |
|                     |                     |                     |                     | :                    |                     |                     |                     |                     |                     |                      |                    |                    |                  |                  |                  |                  |                  | •                |                    |                  |                  |            |           |           |                  |                  |           |                    |           |
| -                   |                     |                     |                     | <del>- :</del>       |                     |                     |                     |                     |                     |                      |                    |                    |                  |                  |                  |                  |                  |                  |                    |                  |                  |            |           |           |                  |                  |           |                    |           |
| 4                   | ų                   | 2,                  | <b>4</b>            | رر<br>ر              | 4                   | ςί                  | 2,                  | 2,                  | ر<br>ا              | 2,                   | 2,                 | 4,                 | <del>,</del>     | . <del>.</del> . | <del>_</del>     | . I,             | <del>.</del> .   | <del>-</del>     | ı,                 | <br>             | . I,             | . <u>.</u> | .1,       | Ξ,        | . 1.             | Ļ,               | : 1,      | <del>,</del>       | : 1,      |
| H0056: 2, T0041: 2, | r0042: 2, S0210: 2, | 10695: 2, H0529: 2, | .0769: 2, L0643: 2, | .0764: 2, L.0766: 2, | .0653: 2, L0658: 2, | H0519: 2, H0690: 2, | H0670: 2, H0539: 2, | .0602: 2, L0748: 2, | .0745: 2, L0747: 2, | .0759: 2, L.0593: 2, | 10665: 2, H0667: 2 | H0543: 2, H0422: 2 | .0600: 2, H0186: | H0713: 1, H0716: | S6024: 1, H0583: | H0557: 1, H0254: | H0661: 1, H0402: | H0638: 1, L0534: | S0408: 1, S0007: 1 | H0208: 1, H0619: | H0351: 1, H0261: | H0392:     | H0586:    | H0486:    | H0635: 1, H0427: | H0156: 1, S0474: | H0204:    | H0546: 1, L0041: 1 | H0178:    |
| 2, TC               | 2, 50               | 2, H(               | 2,10                | 2,10                 | 2,10                | 2, H(               | 2, H(               | 2, 1.0              | 2, L0               | 2, L0                | 2, H(              | 2, H(              | 2, H(            | 1, H(            | 1, HC            | 1, H(            | 1, H(            | 1, LC            | 1, SO              | 1, H             | 1, H             | 1, H(      | 1, H      | 1, H      | ì, H(            | 1, S(            |           | 1, L               |           |
| 056:                | 742:                | 695:                | 769:                | 764:                 | 553:                | 519:                | 670:                | 502:                | 745:                | 759:                 | 665:               | 543:               | 900:             | 713:             | 324:             | 657:             | 661:             | 638:             | 408:               | 208:             | 351:             | 10549: 1,  | H0438: 1, | H0333: 1, | 635:             | 156:             | H0309: 1, | 546:               | H0009: 1, |
| 呈                   | <u>Ž</u>            | H                   | <u>ප</u>            | <u>2</u>             | <u>s</u>            | 9                   | H<br>H              | <u> </u>            | <u>2</u>            | <u>2</u>             | 유                  | 丑                  | <u> </u>         | 丑                | <u>S</u>         | 呈                | 丑                | 田                | Š                  | 丑                | 丑                | ឣ          | 丑         | 된         | 丑                | H                | H         | 兒                  | ΉO        |
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|                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                      |                    | •                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |            |           |           |                  |                  |           |                    |           |
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| L                   |                     |                     |                     |                      |                     |                     |                     |                     |                     |                      |                    | _                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |            |           |           |                  |                  |           |                    |           |
|                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                      |                    |                    |                  |                  |                  |                  |                  | .*               |                    |                  |                  |            |           |           |                  |                  |           |                    |           |
|                     |                     |                     |                     | •                    |                     | ,                   |                     |                     |                     |                      |                    |                    |                  |                  |                  |                  |                  |                  |                    |                  |                  |            |           |           |                  |                  |           |                    |           |
| L                   |                     |                     |                     |                      |                     |                     |                     | _                   |                     |                      |                    |                    |                  |                  |                  |                  |                  |                  |                    |                  |                  |            |           |           |                  |                  |           | •                  | _         |
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| L                   |                     |                     |                     |                      |                     |                     |                     | <u>,</u>            |                     |                      |                    |                    | _                |                  |                  |                  |                  |                  |                    |                  |                  |            |           |           |                  | _                |           |                    |           |

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|------------------|------------------|-----------|------------------|------------------|--------------|------------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|-------------------|--------------------|-------------|--------------|--------------|--------------|----------|--------------|-------------|---------------|-------|-------------|--------------------|------------------|------------------|
|                  |                  |           |                  |                  |              | <del>; -</del>   |                  |                  | _                |                  |        |                  |                  | · <u>-</u>       |                   |                    |             |              |              |              |          |              | <del></del> |               |       |             |                    | •                |                  |
| ],               | 1,               |           | 1,<br>           | 1,               | 1,           | l,               | 1,               | 1,               | 1,               | 1,               | 1,     | 1,               | 1,               | 1,               | 1,                |                    | 1,          | 1,           | 1,           | 1,           | 1,       | 1,           | 1,          | 1,            | 1,    | 1,          |                    | 1,               | 1,               |
| H0123: 1, H0050: | .0471: 1, H0012: | 1, S0051: | H0071: 1, H0083: | H0416: 1, H0288: | ?: 1, T0006: | H0644: 1, H0181: | S0364: 1, H0068: | H0135: 1, H0038: | H0040: 1, H0634: | H0063: 1, H0087: | H0269: | H0412: 1, T0004: | 30038: 1, H0100: | .0065: 1, H0647: | .0369: 1, L.0640: | L0763: 1, L0667: 1 | : 1, L0363: | ': 1, L0768: | ): 1, L0774: | 5: 1, L0378: | •        | 3: 1, L0657: |             | 2: 1, L0532:  |       | : 1, H0699: | H0693: 1, L0438: 1 | H0593: 1, H0683: | H0672: 1, S0328: |
| H0123            | L0471            | H0023     | H0071            | H0416            | H0292        | H064             | S0364            | H0135            | H004             | 900H             | H0077  | H0412            | 8003             | 10065            | 1.0369            | [70.763            | 1.0648      | L0767: 1, I  | L0649: 1,    | L0376: 1,    | L0654: 1 | L0655: 1, ]  | L0634: 1    | L0382: 1      | T0666 | 80052       | H069               | H059             | H067.            |
|                  |                  |           |                  | ,                | i            |                  |                  |                  |                  |                  |        |                  |                  |                  |                   |                    |             |              |              |              |          |              |             |               |       |             |                    |                  |                  |
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|   |  | 174900,<br>236730,<br>601493  |
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|   |  | 10q23   |
| S0330: 1, H0518: 1,<br>H0696: 1, S0406: 1,<br>H0555: 1, S0432: 1,<br>S0118: 1, S3012: 1,<br>S0390: 1, S0206: 1,<br>L0740: 1, L0757: 1,<br>S0031: 1, S0434: 1,<br>L0596: 1, S0194: 1,<br>S0424: 1, H0506: 1 and<br>H0008: 1. | H0677: 7   | H0581: 3, H0615: 3,<br>L0766: 3, L0777: 3,<br>H0657: 2, H0486: 2,<br>H0013: 2, H0641: 2,<br>L0803: 2, S0011: 2,<br>H0543: 2, H0423: 2,<br>H0556: 1, H0341: 1,<br>S0420: 1, S0356: 1,<br>H0575: 1, S0049: 1,<br>H0575: 1, S0049: 1,<br>H0575: 1, S0049: 1,<br>H0057: 1, H0545: 1,<br>H0069: 1, L0471: 1,<br>H0014: 1, S0051: 1,<br>S0003: 1, H0328: 1,<br>H0674: 1, H0032: 1,  |
|   | Pro-9 to Ala-24,<br>Thr-52 to Gly-61,<br>Thr-64 to Ser-70. | His-11 to Ala-17, Pro-29 to Ser-35, Asn-59 to Asp-64, Lys-67 to Leu-72, Gln-101 to Asp-110, L0803: 2, H0641: 2, Gln-181 to Lys-176, H0543: 2, H0423: 2, Gln-213 to Lys-210, H0556: 1, H0341: 1, Gln-213 to Lys-228, S0420: 1, S0356: 1, Pro-253 to Asn-264. H0580: 1, H0586: 1, H0575: 1, S0049: 1, H0575: 1, S0049: 1, H0575: 1, H0545: 1, H0575: 1, H0545: 1, H0575: 1, H0545: 1, H0575: 1, H0545: 1, H0575: 1, H0545: 1, H0575: 1, H0545: 1, H0575: 1, H0545: 1, H0575: 1, H0545: 1, H0575: 1, H0328: 1, H0622: 1, H0032: 1, H0674: 1, H0338: 1, |
|   | 2714   | 2715  |
|   | 377 - 3  | 1125  |
|   | 539  | 540   |
|   | 1018243  | 1018459   |
| !   | HNNBT57  | HCONJ11   |

|   |  | 25,<br>00,<br>71,<br>36,   |
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|   |  | 108725,<br>120700,<br>133171,<br>136836,<br>143890,  |
|   |  | 19p13.3-<br>p13.2  |
| H0616: 1, H0551: 1,<br>T0041: 1, S0440: 1,<br>S0422: 1, L0598: 1,<br>H0529: 1, L0770: 1,<br>L0640: 1, L0774: 1,<br>L0776: 1, L0774: 1,<br>L0776: 1, L0655: 1,<br>L0540: 1, L0789: 1,<br>L0665: 1, S0374: 1,<br>H0650: 1, H0663: 1,<br>H0670: 1, H0699: 1,<br>L0742: 1, L0439: 1,<br>L0754: 1, L0439: 1,<br>L0754: 1, L0590: 1,<br>L0754: 1, L0590: 1,<br>L0754: 1 and L0600: 1. | L0748: 4, L0777: 4,<br>L0756: 2, H0263: 1,<br>H0046: 1, H0023: 1,<br>H0188: 1, L0761: 1,<br>L0662: 1, L0526: 1,<br>L0790: 1, L0747: 1 and<br>L0758: 1. | Ser-7 to Trp-12, H0547: 10, H0542: 10, 19p13.3 Pro-28 to Gly-58, H0266: 9, L0794: 7, p13.2 Lys-212 to Cys-218, S0358: 6, H0559: 6, Glu-229 to Gly-235. L0803: 6, L0666: 6, L0601: 6, H0013: 5, |
|   | Asn-19 to Ile-26,<br>Val-44 to Lys-54,<br>Arg-70 to Val-83,<br>Arg-95 to Thr-100,<br>Arg-136 to Arg-141.   | Ser-7 to Trp-12, Pro-28 to Gly-58, Lys-212 to Cys-218, Glu-229 to Gly-235.   |
|   | 2716   | 2717   |
|   | 1652 -<br>1212   | 1170 - 355   |
|   | 541  | 542  |
|   | 1018501  | 1018772  |
|   | HCQAW68  | HVVCY25  |

| 145981,             | 147141,             | 147670,             | 147670,             | 147670,             | 151440,                                  | 164953,             | 188070,             | 231670,             | 600276,             | 600957,             | 601238,             | 601843,             | 601846,             | 602216,             | 602477              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| H0556: 4, H0550: 4, | H0581: 4, H0551: 4, | H0494: 4, H0529: 4, | .0766: 4, H0519: 4, | H0521: 4, H0265: 3, | 30360: 3, H0333: 3,                      | H0318: 3, H0150: 3, | H0083: 3, H0038: 3, | H0538: 3, L0653: 3, | H0520: 3, L0602: 3, | .0747: 3, L0752: 3, | .0591: 3, S0026: 3, | H0422: 3, H0170: 2, | 30040: 2, H0657: 2, | H0341: 2, S0444: 2, | H0619: 2, L0717: 2, | S0222: 2, H0592: 2, | H0250: 2, H0427: 2, | S0280: 2, H0156: 2, | H0575: 2, S0010: 2, | 10544: 2, H0457: 2, | H0087: 2, H0100: 2, | .0598: 2, L0648: 2, | .0649: 2, L0805: 2, | ,0776; 2, L0659: 2, | .0517: 2, L0526: 2, | .0809: 2, L0663: 2, | .0664: 2, S0374: 2, | H0435: 2, H0658: 2, | H0672: 2, H0539: 2, |
| H                   | H                   | H                   | 27                  | H                   | SO SO SO SO SO SO SO SO SO SO SO SO SO S | H                   | H                   | H                   | H                   | 21                  | 22                  | H                   | <u>SC</u>           | H                   | H                   | 0 <u>S</u>          | H                   | 0S                  | H                   | )H                  | H                   |                     | 3                   | 7                   | 3                   | 3                   | 31                  | )H                  | H                   |
|                     |                     |                     |                     |                     |  | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     |                     | <u>.</u>            |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | <del>- , - ·</del>  |                     |                     |                     |                     |                     |                     |
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| H0696: 2, H0555: 2, | H0436: 2, S0027: 2, | L0439: 2, L0779: 2, | S0434: 2, L0596: 2, | H0136: 2, H0543: 2, | H0423: 2, L0600: 2, | H0624: 1, H0171: 1, | H0685: 1, H0583: 1, | H0650: 1, H0656: 1, | S0116: 1, S0212: 1, | S0282: 1, H0484: 1, | H0255: 1, H0662: 1, | H0638: 1, H0125: 1, | S0418: 1, S0420: 1, | S0356: 1, S0376: 1, | S0132: 1, H0437: 1, | H0261: 1, H0549: 1, | H0370: 1, L0586: 1, | H0069: 1, T0048: 1, | H0196: 1, H0052: 1, | H0204: 1, H0545: 1, | H0009: 1, H0566: 1, | H0081: 1, H0050: 1, | H0012: 1, T0003: 1, | H0373: 1, S0388: 1, | T0010: 1, H0375: 1, | H0687: 1, L0483: 1, | H0031: 1, H0553: 1, | H0644: 1, H0628: 1, | H0617: 1, H0606: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     | ·                   |                     | _ ·                 |                     |                     | <del>.</del>        |                     |                     |                     |                     | ·                   |                     | <del></del>         | ·                   |                     |                     | ,                   |                     |                     | <del></del>         |                     |                     |                     |
| }                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |
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|---------------------|---------------------|---------------------|---------------------|---|----------------------|---|---------------------|--------------|---------------------|---------------------|---------------------|-----|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|------------------------|---|-----------------------|-----------------------|---------------------|---------------------|
|                     |                     |                     |                     | ٠   |                      |   |                     |              |                     |                     |                     |     |   |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                        |   | 22q13.1               |                       |                     |                     |
| H0068: 1, H0090: 1, | H0591: 1, H0063: 1, | H0412: 1, H0396: 1, | H0561: 1, S0372: 1, |   | .0770: 1, L.0637: 1, | - | .0800: 1, L0641: 1, |              | .0662: 1, L0363: 1, | .0768: 1, L0387: 1, | ,0804: 1, L0378: 1, |     | .0657: 1, L0636: 1,                           | S0216: 1, H0698: 1, | .0438: 1, H0593: 1, | H0670: 1, H0660: 1, | H0648: 1, H0651: 1, | S0328: 1, S0378: 1, | H0518: 1, H0704: 1, | H0134: 1, H0478: 1, | S3014: 1, S0028: 1, |   | .0592: 1, S0011: 1, | H0665: 1, H0667: 1 and | S0242: 1.                                     | L0662: 14, L0659: 11, | L0665: 11, L0747: 11, | S0250: 9, H0575: 7, | L0439: 7, L0754: 6, |
|                     | <u> </u>            | <b>.</b>            | 4                   | <u>, , , , , , , , , , , , , , , , , , , </u> |                      |   |                     |              |                     |                     |                     | . = | <u>, , , , , , , , , , , , , , , , , , , </u> | <u>.</u>            |                     | Д                   |                     | <u> </u>            |                     |                     | <u> </u>            |   |                     | <u> </u>               | <u>, , , , , , , , , , , , , , , , , , , </u> |                       |                       |                     |                     |
|                     |                     |                     |                     |   |                      |   | -                   |              |                     |                     | •                   |     |   |                     |                     |                     | •                   |                     |                     |                     | •                   | • |                     |                        |   | 2718                  |                       | _                   |                     |
|                     |                     |                     |                     |   |                      |   |                     | <del>,</del> |                     |                     |                     |     |   |                     |                     |                     | •                   | •                   | .,                  |                     |                     |   |                     |                        |   | 233 - 1249            |                       |                     |                     |
|                     | •                   |                     |                     |   |                      |   |                     |              |                     |                     |                     |     |   |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                        |   | 543                   |                       |                     |                     |
|                     |                     |                     |                     |   |                      |   |                     |              |                     |                     | <del></del>         |     |   |                     |                     |                     |                     |                     |                     | -                   |                     |   |                     |                        |   | 1018802               |                       |                     |                     |
|                     |                     |                     |                     |   |                      |   |                     |              |                     |                     |                     | ,   |   | •                   |                     |                     |                     |                     |                     |                     |                     |   | ·                   |                        |   | HCOMB65               |                       |                     |                     |

| 138981,             | 182380,             | 188826,             | 190040,             | 190040,             | 190040              |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ~                   |                     |                     |                     |                     |
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|                     | ·<br><u>·</u>       |                     |                     |                     |                     |                     | ف سوچه کاند         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |
| H0486: 5. H0551: 5. | S0142: 5, L0769: 5, | L0744: 5, L0740: 5, | L0751: 5, L0731: 5, | H0542: 5, H0556: 4, | H0295: 4, H0271: 4, | H0412: 4, L0764: 4, | L0771: 4, L0666: 4, | S0126: 4, H0521: 4, | H0584: 3, H0650: 3, | S0420: 3, S0360: 3, | S0132: 3, H0581: 3, | H0039: 3, H0040: 3, | S0344: 3, L0667: 3, | L0774: 3, L0663: 3, | L0664: 3, H0144: 3, | H0660: 3, H0648: 3, | H0436: 3, L0749: 3, | L0779: 3, H0265: 2, | T0002: 2, H0686: 2, | H0294: 2, S0212: 2, | H0254: 2, S0418: 2, | S0045: 2, S0046: 2, | S0140: 2, H0599: 2, | H0150: 2, H0510: 2, | H0266: 2, S0003: 2, | H0090: 2, H0100: 2, | L0564: 2, H0625: 2, | H0633: 2, L0763: 2, | L0648: 2, L0767: 2, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | ·                   |                     |                     | :                   |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     | _                   |                     |                     |                     |                     | <del></del>         |                     |                     | -                   |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0766: 2, L0806: 2, | L0518: 2, L0783: 2, | L0809: 2, S0292: 2, | H0689: 2, H0435: 2, | H0658: 2, H0670: 2, | H0672: 2, H0555: 2, | S0028: 2, L0777: 2, | L0755: 2, L0757: 2, | H0445: 2, L0605: 2, | L0590: 2, L0599: 2, | S0194: 2, H0543: 2, | H0423: 2, H0624: 1, | S0114: 1, H0583: 1, | H0657: 1, L0422: 1, | LØ760: 1, S0116: 1, | H0484: 1, H0255: 1, | H0661: 1, H0402: 1, | H0300: 1, S0356: 1, | H0208: 1, H0619: 1, | H0393: 1, L0717: 1, | H0370: 1, H0587: 1, | H0559: 1, H0013: 1, | H0635: 1, S0280: 1, | L0021: 1, L0022: 1, | H0004: 1, H0052: 1, | H0309: 1, H0546: 1, | H0545: 1, H0457: 1, | H0566: 1, H0123: 1, | H0050: 1, H0014: 1, | H0083: 1, H0188: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     |                     |                     |                     | - <del>:</del><br>: |                     |                     |                     | -                   |                     |                     |                     | -                   | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | · · · · · ·         |                     |                     |                     |                     |                     |                     |
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|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|--------------------|-----------|--------------------|--------------------|------------------|---------|-----------|----------|----------|----------|-------------|----------|----------|----------|----------|---------------------|-------|--------------------|------------------|------------------|------------------|---------------------|------------------|
|                  |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       | -                  |                  |                  |                  |                     |                  |
|                  |                  | •                |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          | •                   |       |                    |                  |                  |                  | •                   |                  |
|                  |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   | - ,-             |                  | _                |                    |           |                    |                    |                  |         |           |          | -        |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
| 0: 1,            | <b>‡</b> : 1,    | 8: 1,            | 3: 1,             | 4: 1,            | 7: 1,            | 6: 1,            | <b>4:</b> 1,       | 4.1.      | 1:1,               | 6: 1,              | ): 1 <b>,</b>    | ); 1,   | 7: 1,     | 2: 1,    | i: 1,    | 3: 1,    | <b>‡</b> 1, | 3: 1,    | 5: 1,    | 7: 1,    | 5: 1,    | 4: 1,               | ): 1, | ): 1,              | 9: 1,            | . <del>1</del> . | 0: 1,            | 8: 1,               | 2: 1,            |
| 1029             | 0217             | 1042             | [02]              | <b>1064</b>      | 1061             | 045              | 026                | T0004: 1  | 1064               | <b>1064</b>        | 0210             | L0770:  | 1,0637: 1 | L0642:   | L0521: 1 | L0803:   | L0784: 1    | L0653: 1 | L0555: 1 | L0807: 1 | L0635: 1 | ,038                | 970   | 0310               | 1051             | <b>4068</b>      | 3033             | 1051                | 3012             |
| 1, F             | 1, S             | 1, F             | 1, H              | 1,1              | 1, F             | 1,1              | 1, H               | 1,1       | 1,1                | 1, F               | 1, S             | 1, L    | •         |          | ^        |          |             |          | 7        |          | 1, I     | 1, I                | 1,1   | 1, S               | 1.1              | . 1, 1           | : 1, 8           | 1, F                | 1, S             |
| H0687: 1, H0290: | H0028: 1, S0214: | H0688: 1, H0428: | (10023: 1, H0213: | H0553: 1, H0644: | H0111: 1, H0617: | H0165: 1, L0456: | S0036: 1, H0264: 1 | H0413: 1, | H0509: 1, H0641: 1 | H0647: 1, H0646: 1 | S0208: 1, S0210: | 0520: 1 | .0638:    | .0761: 1 | .0773:   | .0768: 1 | 0775: 1     | .0378: 1 | 0654: 1  | .0655: 1 | .0656: 1 | L0517: 1, L0384: 1, | 367   | S0374: 1, S0310: 1 | H0520: 1, H0519: | H0690: 1, H0684: | H0659: 1, S0330: | S0378: 1, H0518: 1, | S0044: 1, S3012: |
| 田田               | Œ                | H                | 잂                 | Ħ                | H                | Ħ                | 80                 | Ħ         | 日                  | Ħ                  | 80               | 3       | 2         | <u> </u> | <u> </u> | <u> </u> | 3           | 2        | <u> </u> | <u> </u> | 3        | 3                   | 2     | <u>S</u>           | H                | Ħ                | Ħ                | <u>80</u>           | <u>S</u>         |
|                  |                  |                  |                   | :                |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   | •                |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   | ŧ                |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
| -                |                  |                  | _                 |                  |                  |                  |                    |           |                    |                    | _                |         |           |          |          |          |             |          |          |          |          | _                   |       |                    |                  |                  | _                |                     |                  |
|                  |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
| _                |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          | _        |          |          | _                   |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          | ,        |          |          |                     |       |                    |                  |                  |                  |                     |                  |
| _                |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             | `        |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
| -                |                  |                  |                   |                  |                  | _                |                    |           |                    | _                  |                  |         |           |          |          |          | _           |          | _        |          |          |                     |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
| <br>             |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   |                  |                  |                  |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |
|                  |                  |                  |                   |                  |                  | _                |                    |           |                    |                    |                  |         |           |          |          |          |             |          |          |          |          |                     |       |                    |                  |                  |                  |                     |                  |

| ·   |  |            |                     |                     |                     |                     |                     |                     | -                   |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---|--|------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| ·   |  |            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |
| S0037: 1, S3014: 1,<br>L0750: 1, L0780: 1,<br>S0260: 1, L0591: 1,<br>S0011: 1, S0026: 1,<br>H0653: 1, H0667: 1,<br>H0136: 1, H0216: 1,<br>S0192: 1, S0276: 1 and<br>H0677: 1. |  | H0328: 2   | L0758: 9, L0770: 7, | H0620: 6, L0731: 6, | L0747: 5, L0777: 5, | H0265: 4, L0771: 4, | L0748: 4, L0759: 4, | L0769: 3, L0662: 3, | L0774: 3, L0526: 3, | L0439: 3, L0751: 3, | L0750: 3, S0358: 2, | H0424: 2, S0144: 2, | L0520: 2, L0764: 2, | L0364: 2, L0776: 2, | L0809: 2, L0664: 2, | L0754: 2, S0436: 2, | L0588: 2, L0601: 2, | H0556: 1, H0685: 1, | S0040: 1, S6024: 1, | H0341: 1, H0484: 1, | H0661: 1, H0306: 1, |
|   | Pro-13 to Ala-20,<br>Pro-53 to Ser-61. |            | Ala-4 to Ala-11.    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ·   | 2719                                   | 2720       | 2721                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 50 - 319                               | 1186 - 476 | 1 - 1005            |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 544                                    | 545        | 546                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 1018907                                | 1018943    | 1019326             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                   |
|   | HVVCF30                                | HODBV21    | HCHMD81             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |

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|                  |                    |          |          |                    |           |                  |                  |            |                    |           |                  |                  |                  |                  |          |             |          |          |                    |                  |        |                    |            |                  |             |                    |                  |          |                |
|                  |                    |          |          |                    |           |                  |                  |            |                    |           |                  |                  |                  |                  |          |             |          |          |                    |                  |        |                    | _          |                  |             |                    |                  |          |                |
|                  |                    |          |          | <i>,</i> .         |           |                  |                  |            |                    |           | •                |                  |                  |                  |          |             |          |          |                    |                  |        |                    |            |                  |             |                    |                  |          |                |
|                  |                    |          |          | •                  |           |                  |                  |            |                    |           |                  |                  |                  |                  |          |             |          |          |                    |                  |        |                    |            |                  |             |                    |                  |          |                |
|                  |                    |          |          |                    |           |                  | _                |            |                    |           |                  |                  |                  |                  |          | _           |          |          |                    | •                | -      | •                  |            | <u>,</u>         |             |                    |                  | and      |                |
| 142: 1,          | 278: 1,            | 486: 1   | 156: 1   | H0575: 1, H0706: 1 | 263: 1    | 571: 1           | 471:1            | , H0266: 1 | 10428: 1, T0006: 1 | H0313: 1  | 477: 1           | l, H0494: 1      | 538: 1           | 374: 1           | 388: 1   | 1, L0653: 1 | L0657: 1 | 384: 1   | L0789: 1, L0666: 1 | 144:1            | 547: 1 | 126: 1             | 670: 1     | 539: 1           | 406: 1      | 037: 1             | 028: 1           |          |                |
| 1, S04           | 1, S02             | 1, H0    | 1, H0    | 1, H0              | 1, H0263: | 1, H0            | 1,10             | 1, H0      | 1, TO              | 1, H0     | 1, H0            | 1, HC            | 1, HC            | .0772: 1, L0374: | 1, LO    | 1, 10       | 1, 10    | 1, 10    | 1,10               | 1, HO            | 1, HO  | 1, S0              | 1, HC      | 1, HC            | 1.50        | 1. SQ              | 1, S0            | 1,10     | <del>-</del> i |
| S0418: 1, S0442: | S0354: 1, S0278: 1 | 10550:   | [0069:   | 0575               | 30474:    | H0009: 1, H0571: | H0242: 1, L0471: | H0012: 1   | [0428:             | 10644: 1, | 10551: 1, H0477: | 10264: 1         | H0131: 1, H0538: | .0772:           | .0766: 1 | .0378: 1    | .0655: 1 | .0659:   | .0789:             | .0665: 1, H0144: | 0374:  | H0593: 1, S0126: ] | 10435:     | 10672: 1, H0539: | 10710:      | L0611: 1, S0037: 1 | S3014: 1, S0028: | S0032: 1 | S0434:         |
| S                | Š                  | <u> </u> | <u> </u> | <u> </u>           | S         | <u> </u>         | 五                | <u> </u>   | <u>æ</u>           | <u> </u>  | <u> </u>         | <u>;:::</u><br>, | <u>II</u>        | <u></u>          | <u></u>  | <u></u>     | <u> </u> | <u> </u> | ᆜ                  | <u> </u>         | S      | <u>;11;</u>        | <u>iii</u> | <u>;11;</u>      | <u>نىلن</u> |                    | S                | S        | S              |
|                  |                    |          |          |                    |           |                  |                  |            |                    |           |                  |                  |                  |                  |          |             |          |          |                    |                  |        |                    |            | •                |             |                    |                  |          |                |
|                  |                    |          |          |                    |           |                  |                  |            |                    |           |                  |                  | •                |                  |          |             |          |          |                    |                  |        |                    |            |                  |             |                    |                  |          |                |
|                  |                    |          |          |                    | _         |                  |                  |            |                    |           |                  | ·                |                  |                  |          |             |          |          |                    |                  |        |                    |            |                  |             |                    |                  |          |                |
|                  |                    |          |          |                    |           |                  |                  |            |                    |           |                  | •                |                  |                  |          |             |          |          |                    |                  |        |                    |            |                  |             |                    |                  |          |                |
|                  |                    |          |          |                    |           |                  |                  |            |                    |           | •                |                  |                  |                  | _        |             |          |          |                    |                  |        |                    |            |                  |             |                    |                  | -        |                |
|                  |                    |          |          |                    |           |                  |                  |            |                    |           |                  |                  |                  |                  |          |             |          |          |                    |                  |        |                    |            |                  |             |                    |                  |          |                |
|                  |                    |          |          |                    |           |                  |                  | =          |                    |           |                  | _                |                  |                  |          |             |          |          |                    | -                |        |                    |            |                  |             |                    |                  |          |                |
| -                |                    |          |          |                    |           | -                |                  |            |                    |           |                  |                  |                  |                  |          |             |          |          |                    |                  |        |                    |            |                  |             |                    |                  |          | -              |
|                  |                    |          |          |                    | •         |                  |                  |            |                    |           |                  | •                |                  |                  | ٠        |             |          |          |                    |                  |        |                    |            |                  |             | •                  |                  |          |                |
|                  | -,                 |          |          |                    |           |                  | ·                |            |                    |           |                  |                  |                  |                  |          |             |          |          | <u> </u>           |                  |        |                    |            |                  |             |                    |                  |          |                |
|                  |                    |          |          |                    |           |                  |                  |            |                    |           |                  |                  |                  |                  |          |             |          |          |                    |                  |        |                    |            |                  |             |                    |                  |          |                |
|                  |                    |          |          | ٠,                 |           |                  |                  |            | •                  |           |                  |                  |                  |                  |          |             |          |          |                    |                  |        |                    |            |                  |             |                    |                  |          |                |
|                  |                    |          |          |                    |           |                  |                  |            |                    |           |                  |                  |                  |                  |          |             |          |          |                    |                  | _      |                    |            |                  |             |                    |                  |          |                |

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|-----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---|---------------------|---------------------|---------------------|---------------------|
| 124200,               | 147440,              | 160781,             | 235800,             | 600175              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |   |                     |                     |                     |                     |
| 12q23                 |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |   |   |                     |                     |                     |                     |
| L0666: 13, L0665: 13, | L0588: 12, L0601: 9, | S0358: 8, L0664: 8, | S0360: 7, L0471: 7, | L0657: 7, L0659: 7, | L0748: 7, H0415: 6, | S0214: 6, L0520: 6, | .0372: 6, L0803: 6, | ,0375: 6, L0655: 6, | 10659: 6, L0608: 6, | .0362: 6, L0361: 6, | S0376: 5, L0663: 5, | .0439: 5, T0049: 4, | H0581: 4, L0646: 4, | .0804: 4, L0809: 4, | 30328: 4, L0747: 4, | .0749: 4, L0755: 4, | .0731: 4, L0591: 4, | .0604: 4, L0595: 4, | H0542: 4, H0662: 3, | H0545: 3, H0687: 3, | H0100: 3, H0509: 3, | H0529: 3, L0763: 3, | .0764: 3, L0662: 3, | .0794: 3, S0330: 3,                           | .0740: 3, H0445: 3,                           | .0600: 3, H0265: 2, | H0661: 2, S0418: 2, | H0156: 2, H0318: 2, | H0172: 2, H0620: 2, |
|                       | <u>2</u> ,           |                     |                     |                     |                     |                     | <u>l</u>            | <u>.</u>            | <u> </u>            |                     | S                   | <u>-</u>            | <u>æ</u>            |                     | S                   |                     |                     | <u>.</u>            | <u> </u>            | <u>年</u>            |                     | <u> </u>            | H                   | <u>, , , , , , , , , , , , , , , , , , , </u> | <u>, , , , , , , , , , , , , , , , , , , </u> | <u></u>             | <u> </u>            |                     | H                   |
| 2722                  |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   | _                   |   |   |                     |                     |                     |                     |
| 11 - 1192             |                      | ,                   |                     |                     |                     |                     |                     | <u>-</u>            |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |   |   |                     |                     |                     |                     |
| 547                   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |   |                     |                     |                     |                     |
| 1019338               |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     | ,                   |                     |                     |                     |                     |                     |                     |   |   |                     |                     |                     |                     |
| HAZAR95               |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |   |                     |                     |                     |                     |

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|                     |                     |                     | -                   |           |           |             |             |           | <u></u>             |                     | _                   |                     |           |           |           |                     |                     |                    |                     |                    |                  |                    |                    | _                |                  |                  |                  |                     |           |
|                     |                     |                     |                     |           |           |             |             |           |                     |                     |                     |                     |           |           |           |                     |                     |                    |                     |                    |                  |                    |                    |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     | ·         |           |             |             |           |                     |                     |                     |                     |           |           | ·         | _                   |                     |                    |                     |                    |                  |                    |                    |                  |                  |                  |                  |                     |           |
| [0: 2,              | 6: 2,               | 74: 2,              | 4:2,                | L0369: 2, | L0648: 2, | L0363: 2,   | L0775: 2,   | L0378: 2, | 2: 2,               | 70: 2,              | 30: 2,              | 4: 2,               | L0752: 2, | L0758: 2, | L0592: 2, | 55: 2,              | 24: 2,              | 86: 1,             | <b>42</b> : 1,      | 57: 1,             | 63: 1,           | 56: 1,             | 4: 1,              | 8: 1,            | 15: 1,           | 78: 1,           | 92: 1,           | 22: 1,              | 39: 1,    |
| 2, T00]             | 2, T000             | 2, H06              | 2, S03 <sup>2</sup> | , L036    | 2, LO64   | , L036      | , L077      | 2, 1.037  | 2, S012             | 2, H06              | 2, S038             | 2, L07              | 2, 1.075  | 2, 1,075  | 2, LOS    | 2, H06              | 2, S042             | 1, H06             | 1, S03              | , H06              | 1, H06           | 1, S035            | , \$035            | . S040           | S004             | 1, S02           | 1, H03           | 1, LOG              | 1, T0039: |
| H0051: 2, T0010: 2, | H0510: 2, T0006: 2, | H0617: 2, H0674: 2, | 10413: 2, S0344: 2, | 0598: 2,  | 0637: 2,  | .0626: 2, 1 | .0768: 2, I | 0651: 2,  | .0383: 2, S0122: 2, | 10690: 2, H0670: 2, | 10648: 2, S0380: 2, | 10626: 2, L0744: 2, | .0777: 2, | .0757: 2, | 0596: 2,  | .0593: 2, H0665: 2, | 10543: 2, S0424: 2, | H0170: 1, H0686: 1 | H0685: 1, S0342: 1, | S0134: 1, H0657: 1 | H0341: 1, H0663: | H0306: 1, S0356: 1 | S0442: 1, S0354: 1 | 30444: 1, S0408: | 30468: 1, S0045: | H0411: 1, S0278: | 10370: 1, H0392: | H0587: 1, L0622: 1, | H0486: 1, |
| 串                   | 茁                   | 耳                   | 茁                   | Ħ         | <u> </u>  | 크           | ĭ           | <u> </u>  | <u> </u>            | 耳                   | Ï                   | Ĭ                   | <u> </u>  | <u> </u>  | ĭ         | 크                   | Ĭ                   | Ĭ                  | Ħ                   | <u>x</u>           | I                | Ĭ                  | <u> </u>           | <u>S</u>         | S                | 耳                | Ĭ                | 臣                   | 耳         |
|                     |                     |                     |                     |           |           | ,           |             |           |                     |                     |                     |                     |           |           |           |                     |                     |                    |                     |                    |                  |                    |                    |                  |                  |                  |                  |                     |           |
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| -                   |                     |                     |                     |           | _         |             | ·<br>       |           |                     |                     |                     |                     |           |           |           |                     |                     |                    |                     |                    |                  |                    | _                  |                  |                  |                  |                  |                     |           |
| ļ<br>               |                     |                     |                     |           |           |             |             |           |                     |                     |                     |                     |           |           |           |                     |                     |                    | <del>-</del> .      |                    |                  |                    |                    | _                |                  |                  |                  |                     |           |
|                     |                     |                     |                     |           |           |             |             |           |                     |                     |                     |                     |           |           |           |                     |                     |                    |                     |                    |                  |                    |                    |                  |                  |                  |                  |                     |           |
| _                   | -                   |                     |                     |           |           |             |             |           |                     |                     |                     | <u>.</u>            |           |           |           |                     |                     |                    |                     |                    |                  |                    |                    |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     |           |           |             | <u></u>     |           |                     |                     |                     |                     |           |           |           |                     | <b></b>             |                    |                     |                    |                  |                    |                    |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     |           |           |             |             |           |                     |                     |                     |                     |           |           |           |                     |                     |                    |                     |                    |                  |                    |                    |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     | ·         |           |             |             |           |                     |                     |                     | •                   |           |           |           |                     |                     |                    |                     |                    |                  |                    |                    |                  |                  |                  | •                |                     |           |
|                     |                     |                     |                     |           |           |             |             |           | _                   | -                   | -                   |                     |           |           |           |                     |                     |                    |                     |                    |                  |                    |                    |                  | <u>.</u>         |                  |                  |                     |           |
|                     |                     |                     |                     |           |           |             |             |           |                     |                     |                     |                     |           |           |           |                     |                     |                    |                     |                    |                  |                    |                    |                  |                  |                  |                  |                     |           |
|                     |                     |                     |                     |           |           |             |             |           |                     |                     |                     |                     |           |           |           | · .                 |                     |                    |                     |                    |                  |                    |                    |                  |                  |                  |                  |                     |           |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>·</u>            | -                   |                     |                     |                     |                     |                     |                         |          |                     |                     |                     |                     |                     |                     |                     |                     |
| T0060: 1, H0427: 1, | H0599: 1, H0004: 1, | S0346: 1, H0196: 1, | H0052: 1, H0263: 1, | H0544: 1, T0003: 1, | H0083: 1, H0629: 1, | S6028: 1, H0188: 1, | S0003: 1, H0428: 1, | H0039: 1, H0030: 1, | H0553: 1, H0165: 1, | H0169: 1, S0036: 1, | H0135: 1, H0551: 1, | H0264: 1, H0412: 1, | Т0069: 1, L0475: 1, | S0370: 1, L0065: 1, | S0438: 1, H0647: 1, | H0649: 1, S0422: 1, | S0426: 1, L0762: 1, | L0371: 1, L0770: 1, | <br>L0761: 1, L0641: 1, |          | L0521: 1, L0387: 1, | L0766: 1, L0649: 1, | L0774: 1, L0807: 1, | L0517: 1, L0540: 1, | L0526: 1, L0384: 1, | L0382: 1, L0530: 1, | L0647: 1, L0787: 1, | L0532: 1, S0374: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |          |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | =                   | -                   |                     |                     | -                   |                     |                     |                     |                     |                     | -                   |                     | -                   | <br>                    | <u>-</u> |                     | <u>.</u>            | <i>:</i>            |                     |                     | <del></del> ,       | -                   |                     |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |          |                     |                     |                     |                     |                     |                     |                     |                     |
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| L0565: 1, H0691: 1,<br>L0438: 1, H0547: 1,<br>H0519: 1, H0365: 1,<br>H0689: 1, H0684: 1,<br>H0658: 1, H0660: 1,<br>H0666: 1, S0332: 1,<br>H0522: 1, S0013: 1, | H0696: 1, H0704: 1,<br>S0044: 1, S0404: 1,<br>H0436: 1, S0432: 1,<br>S3012: 1, S0027: 1,<br>S0206: 1, L0779: 1,<br>L0759: 1, L0683: 1,<br>S0434: 1, L0589: 1,<br>L0590: 1, L0599: 1,<br>H0667: 1, H0423: 1 and<br>H0352: 1. | L0776: 3, H0341: 2,<br>L0005: 2, T0023: 2,<br>L0766: 2, L0527: 2,<br>L0659: 2, L0809: 2,<br>L0740: 2, L0748: 2,<br>L0731: 2, L0747: 2,<br>L0731: 1, H0362: 2,<br>S0114: 1, H0305: 1,<br>S0376: 1, H0393: 1,<br>H0574: 1, H0013: 1,<br>H0578: 1, L0483: 1, |
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| H0030: 1, H0674: 1,<br>H0647: 1, L0763: 1,<br>L0646: 1, L0374: 1,<br>L062: 1, L0768: 1,<br>L0774: 1, L0663: 1,<br>L0438: 1, H0520: 1,<br>H0658: 1, S0328: 1,<br>H0478: 1, L0745: 1,<br>L0758: 1, H0445: 1 and | H0031: 4, S0007: 2,<br>H0244: 2, S0010: 2,<br>H0194: 2, H0553: 2,<br>S0036: 2, H0040: 2,<br>H0529: 2, L0005: 1,<br>S0356: 1, H0676: 1,<br>H0411: 1, S0222: 1,<br>S6014: 1, H0587: 1,<br>H0497: 1, H0013: 1,<br>H0575: 1, H0327: 1,<br>L0471: 1, H0024: 1,<br>L0143: 1, H0538: 1,<br>H0660: 1, H0538: 1,<br>H0660: 1, H0539: 1,<br>H0521: 1, H0539: 1,                                    | H0683: 11, H0617: 3,<br>L0766: 2, H0686: 1,<br>H0254: 1, H0255: 1,<br>L0021: 1, H0123: 1, |
|---|--|---|
|   | Asn-1 to Pro-7, Glu-33 to Ser-40, Fro-54 to Thr-63, Fro-54 to Thr-63, Cly-109 to Asn-119, H0529: 2, H0040: Gly-109 to Asn-119, H0529: 2, L0005: Glu-145 to Val-150, S0356: 1, H0676: Lys-161 to Gln-168, H0411: 1, S0222: Arg-170 to Phe-175, S6014: 1, H0587: Thr-177 to Tyr-184. H0497: 1, H0013: H0575: 1, H0327: L0471: 1, H0038: H0494: 1, H0538: H0660: 1, H0539: H0521: 1, H0539: | Pro-25 to Glu-54,<br>Ser-66 to Glu-71,<br>Gly-86 to Trp-92,<br>Arg-104 to Asn-109,        |
|   | 2724   | 2725  |
|   | 1 - 570  | 77 - 1120   |
|   | 549  | 550   |
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| H0012: 1, S0051: 1, | H0083: 1, H0039: 1,<br>T0006: 1 H0413: 1 | L0794: 1, L0809: 1, | _                   |                 | H0171: 1, H0686: 1, | H0656: 1, H0574: 1, | H0486: 1, S0316: 1, | H0622: 1, H0038: 1, | S0150: 1, H0520: 1, | H0547: 1, H0658: 1, | H0666: 1, H0521: 1 and | S0028: 1. | AR104: 2, AR061: 1, | AR089: 1, AR033: 0, | AR060: 0, AR096: 0, |      | L0794: 2, L0803: 2, | L0655: 2, L0665: 2, | H0684: 2, L0754: 2, | L0747: 2, H0686: 1, | L0470: 1, H0662: 1, | H0125: 1, S0360: 1, | L0021: 1, H0052: 1, | H0085: 1, H0597: 1, | H0009: 1, S0362: 1, | H0644: 1, H0673: 1, | L0060: 1, H0560: 1, |
| -133 to Asn-        | 138,<br>Tbr-153 to Ser-160               | Asn-269 to Glu-277, | Leu-290 to Tyr-297. | Arg-1 to Arg-8, | Gly-30 to Gln-40,   | Phe-50 to Asp-58,   | Leu-97 to Ser-112.  |                     |                     |                     |                        |           | Pro-89 to Leu-101.  |                     |                     | <br> |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | ,  |                     | ,                   | 2726            |                     |                     |                     |                     |                     | •                   |                        |           | 2727                |                     |                     |      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     | 97 - 468        |                     |                     |                     |                     |                     |                     |                        |           | 400 - 840           |                     |                     |      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     | 551             |                     |                     |                     |                     |                     |                     |                        |           | 552                 |                     |                     |      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     | 1019749         |                     |                     |                     |                     |                     |                     |                        |           | 1019777             |                     |                     |      |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |
|                     |  |                     |                     | HVCAH24         |                     |                     |                     |                     |                     |                     |                        |           | HCEBF54             |                     |                     |      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                     | •                   |                     | -                   |                     |                     |                     |                     |                     |                        |           |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     | •                      |           |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ·<br>               |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | L                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |
|                     | •                   |                     |                     | •                   |                     |                     |                     |                     |                        |           |                       |                     |                     | τ                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0638: 1, L0761: 1, | L0373: 1, L0765: 1, | L0774: 1, L0805: 1, | L0809: 1, L0790: 1, | L0666: 1, L0664: 1, | H0689: 1, H0682: 1, | H0660: 1, L0742: 1, | L0748: 1, S0434: 1, | L0592: 1, L0608: 1, | L0601: 1, H0542: 1 and | H0423: 1. | S0136: 115, L0803: 9, | S0026: 9, L0731: 8, | H0624: 6, S0418: 6, | S0358: 6, L0805: 6, | H0619: 5, L0666: 5, | L0439: 5, L0754: 5, | L0756: 5, H0170: 4, | S0360: 4, H0553: 4, | L0662: 4, H0547: 4, | L0750: 4, L0779: 4, | H0351: 3, H0486: 3, | H0046: 3, H0050: 3, | L0471: 3, H0266: 3, | H0623: 3, L0770: 3, | H0144: 3, H0520: 3, | S0380: 3, S0040: 2, | H0295: 2, H0661: 2, | S0420: 2, S0376: 2, | H0722: 2, H0369: 2, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | •                      |           |                       |                     |                     |                     |                     | -                   |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                        |           | 2728                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                        | ٠         | 176 - 271             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                        |           | 553                   |                     |                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1019869               |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | •                   |                     |                     |                     |                        |           | HPQAD21               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                     |                     |                     |                     |                     |                     |                    |                     |                     | _                   |                     |                     |     |                     |                     |                    |                  |                    | _                  |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----|---------------------|---------------------|--------------------|------------------|--------------------|--------------------|--------------------|---------------------|----------|------------------|------------------|--------------------|--------------------|---|------------------|---------------------|--------------------|
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     | ٠                  |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  | •                  |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     | ı                  |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     | _                   | _                  |                     |                     | ٠.                  | •                   | _                   |     |                     |                     |                    |                  | •                  |                    | •                  | •                   | •        |                  | •                |                    |                    |   |                  |                     |                    |
| H0592: 2, H0574: 2, | H0575: 2, H0051: 2, | S0022: 2, H0615: 2, | H0032: 2, S0438: 2, | S0440: 2, L0598: 2, | .0769: 2, L0774: 2, | 0776: 2, L0659: 2, | .0518: 2, L0663: 2, | H0726: 2, S0126: 2, | 10539: 2, H0696: 2, | 10555: 2, L0740: 2, | .0747: 2, L0753: 2, | 6:1 | S0212: 1, H0484: 1, | H0671: 1, H0662: 1, | <br>               | <b>∸</b> ,       | 5: 1               | 1:1                | 7:1                | H0333: 1, H0632: 1, | 0:1      | 9: 1             | 9.               | 4: 1               | 9: 1               | S0051: 1, H0275: 1,                     | 8: 1             | S0250: 1, H0328: 1, | H0428: 1, H0031: 1 |
| 057                 | 905                 | 921                 | 733                 | 365                 | 71.1                | 9659               | 99                  | 12                  | 69                  | 470                 | 775                 | 890 | <b>48</b>           | 990                 | S0356: 1, S0442: 1 | S0354: 1, S0444: | S0476: 1, H0645: 1 | S0222: 1, H0441: 1 | 10586: 1, H0587: 1 | 9                   | 328      | .0021: 1, H0599: | HO590: 1, H0309: | .0040: 1, H0544: 1 | H0545: 1, H0019: 1 | 227                                     | H0375: 1, S6028: | 032                 | 003                |
| H,                  | Ä,                  | Ħ,                  | S. S.               | ٦̈́                 | ĭ,                  | ĭ,                 | ĭ                   | Š                   | H,                  | Z,                  | ĭ                   | Ĭ,  | Ħ,                  | l, H                | S,                 | S,               | Ħ,                 | Ħ,                 | l, H               | L, H                | ٦, S     | H,               | H, H             | H,                 | H,H                | Ħ                                       | i, S             | Ħ,                  | l, H               |
| 2: 2                | 5:2                 | 2.7                 | 3                   | 0:2                 | 9.2                 | 6:2                | 8:2                 | 9                   | 9                   | 5:2                 | 7:2                 | 3:2 | 2: 1                | Ξ                   | 6:1                | 4:1              | 6: 1               | 2:1                |                    | 33.                 | <u>ښ</u> | 1:1              | Ö                |                    | 5.                 | ======================================= | 5.               | 0                   | .8:                |
| 059                 | 057                 | 8                   | <u>00</u>           | <u>¥</u>            | 970                 | 770                | 051                 | 072                 | 1053                | 055                 | 074                 | 059 | 021                 | 190                 | 035                | 035              | 047                | 022                | 1058               | [03                 | 8        | 90               | 55               | §                  | 202                | 8                                       | [037             | 025                 | 5                  |
| H                   | 王                   | Ś                   | 프                   | S                   |                     | 고                  | ᆚ                   | 프                   | Ξ                   | 프                   | <u></u>             |     | Š                   | Ξ                   | S                  | S                | S                  | S                  | 프                  | <u>=</u>            | 工        | <u> </u>         | <u>I</u>         |                    | 1                  | S                                       | <u>II</u>        | <u>8</u>            | <u> </u>           |
| l                   |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     | •                   |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
| ļ                   |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     | •                   |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
| -                   |                     |                     | _                   |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
| <u> </u>            |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     | •                  |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
| L                   |                     |                     |                     | ·                   |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
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|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  | ٠                  |                    |   |                  |                     |                    |
| <u> </u>            |                     |                     |                     |                     |                     | _                  |                     |                     |                     |                     |                     |     |                     |                     |                    |                  |                    |                    |                    |                     |          |                  |                  |                    |                    |   |                  |                     |                    |

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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     |                     |
| H0111: 1, H0628: 1, | S0364: 1, H0135: 1, | H0616: 1, H0551: 1, | H0268: 1, H0100: 1, | H0494: 1, H0652: 1, | S0210: 1, L0763: 1, | L5566: 1, L0646: 1, | L0800: 1, L0764: 1, | L0771: 1, L0768: 1, | L0649: 1, L0804: 1, | L0775: 1, L0806: 1, | L0527: 1, L0636: 1, | L0783: 1, L0790: 1, | S0296: 1, H0693: 1, | H0519: 1, H0690: 1, | H0682: 1, H0684: 1, | H0648: 1, H0672: 1, | 80454: 1, 80013: 1, | H0626: 1, H0627: 1, | S0028: 1, L0744: 1, | L0777: 1, L0755: 1, | L0757: 1, L0758: 1, | L0759: 1, S0434: 1, | S0436: 1, L0592: 1, | H0667: 1, S0194: 1 and | H0506: 1. | L0439: 4, L0777: 4, | S0214: 3, L0752: 3, | H0686: 2, H0486: 2, | L0775: 2, L0651: 2, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     | -                   |                     |                     |                     |                     |                        |           | Asp-41 to Gly-56.   |                     |                     |                     |
|                     |                     |                     |                     | ;                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2729                |                     |                     |                     |
|                     | -                   |                     |                     | ,                   |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                        |           | 219 - 830           |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 554                 |                     |                     |                     |
|                     | •                   |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1019892             | •                   |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HJPCF71             |                     |                     |                     |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
| L0750: 2, S0114: 1, | H0656: 1, S0212: 1, | H0663: 1, H0586: 1, | H0546: 1, H0024: 1, | H0083: 1, H0510: 1, | H0428: 1, H0038: 1, | H0560: 1, H0646: 1, | L0763: 1, L0773: 1, | L0662: 1, L0774: 1, | L0378: 1, L0661: 1, | L0384: 1, L0789: 1, | L0666: 1, L0438: 1, | S0028: 1, L0747: 1, | L0756: 1, L0758: 1, | H0423: 1 and S0460: 1. | L0779: 7, L0439: 5, | H0624: 4, L0766: 4, | L0438: 4, H0657: 3, | L0662: 3, L0657: 3, | L0666: 3, S0360: 2, | L0764: 2, L0655: 2, | L0532: 2, L0664: 2, | S0428: 2, H0670: 2, | L0777: 2, L0755: 2, | L0731: 2, H0423: 2, | L0465: 2, H0170: 1, | L0002: 1, H0583: 1, | S0400: 1, H0589: 1, | L0481: 1, S0354: 1, | S0358: 1, S0408: 1, |
|                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     | ••                  |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                        | 2730                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     | **                  |                     |                     | -                      | 99-2111             |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | •                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                        | 555                 |                     |                     | <del>.</del>        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1019942             |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        | HVCAE76             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|
|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     |
| H0351: 1, H0411: 1, | H0550: 1, H0333: 1, | S0280: 1, H0098: 1, | H0122: 1, H0318: 1, | H0581: 1, H0263: 1, | H0457: 1, H0566: 1, | H0050: 1, S0050: 1, | H0051: 1, H0188: 1, | H0687: 1, H0615: 1, | H0039: 1, L0055: 1, | H0598: 1, H0040: 1, | S0440: 1, H0529: 1, | L0761: 1, L0667: 1, | L0363: 1, L0768: 1, | L0649: 1, L0804: 1, | L0776: 1, L0661: 1, | L0659: 1, L0809: 1, | L0663: 1, L0665: 1, | L0352: 1, H0547: 1, | H0690: 1, H0666: 1, | H0648: 1, H0555: 1, | H0436: 1, S0390: 1, | S0028: 1, L0744: 1, | L0740: 1, L0747: 1, | L0752: 1, L0753: 1, | L0759: 1, S0031: 1 and | L0605: 1. | H0457: 7, L0743: 5, | L0439: 5, L0751: 5, | L0752: 5, L0731: 4, |
|                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                        |           | His-3 to Trp-8,     | Glu-16 to Gly-23,   | Tyr-47 to Gly-56,   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2731                |                     |                     |
|                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     | _                   | -                   |                     |                     |                     |                     |                     |                     | _                      |           | 1 - 1485            | •                   |                     |
|                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                        |           | 556                 |                     |                     |
|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                      |           | 1020007             |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HOCMH14             |                     |                     |

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|                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                      |                     |                                      |                                      |                  |                  |           |                  |                  |              |           |           |                  | <u> </u>  |                  |           |                  |                  |                 |
|                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                      |                     |                                      |                                      |                  |                  |           |                  |                  |              |           |           |                  |           |                  | ٠         |                  |                  |                 |
| _                   | •                   |                     |                     | <u>:</u>            |                     |                     |                     |                     |                     |                     |                      |                     |                                      |                                      |                  |                  |           |                  |                  |              |           |           |                  |           |                  |           |                  | •                |                 |
| H0618: 3, H0253: 3, | L0662: 3,           | H0689: 3, L0748: 3, | U0777: 3, L0758: 3, | L0785: 2, H0692: 2, | H0662: 2, H0550: 2, | L0770: 2,           | L0659: 2,           |                     | L0759: 2,           | H0225: 1,           | H0650: 1,            | L0426: 1,           | S0442: 1,                            | H0580: 1,                            | S0132: 1,        | H0549: 1,        | H0333: 1, | H0427: 1,        | H0599: 1,        | 1, H0581: 1, | H0052: 1, | L0157: 1, | H0123: 1,        | H0408: 1, | H0266: 1,        | H0687: 1, | H0087: 1,        | H0359: 1,        | L0371: 1,       |
| H0618: 3,           |                     |                     | _                   | _                   |                     | S0049: 2,           | L0764: 2,           |                     |                     |                     | ,S0218: 1, H0650: 1, | , H0656: 1, L0426:  | , S0212: 1,                          | H0489: 1,                            | S0046: 1, S0132: | S0476: 1, H0549: | H0587: 1, | H0559: 1, H0427: | L0021: 1, H0599: | H0274: 1,    | H0421: 1, | H0231: 1, | H0566: 1, H0123: | T0010: 1, | H0355: 1, H0266: | H0271: 1, | H0163: 1, H0087: | H0494: 1, H0359: | S0344: 1, L0371 |
| Ala-88 to Cys-93,   | Ala-108 to Ser-139, | Ser-145 to Ser-151, | Asp-154 to Ala-164, | Pro-168 to Thr-189, | Pro-196 to Ser-203, | Pro-229 to Ala-235, | Thr-255 to Glu-261, | Pro-271 to Pro-276, | Pro-289 to Asn-310, | Pro-318 to Tyr-329, | Arg-334 to Arg-345,  | Arg-347 to Thr-356, | Lys-373 to Arg-391, S0212: 1, S0442: | Glu-396 to Pro-414. H0489: 1, H0580: |                  |                  |           |                  |                  |              |           |           |                  |           |                  |           |                  |                  |                 |
| Ala                 | Ala                 | Ser                 | Asp                 | Pro                 | Pro                 | Pro                 | Thr                 | Pro                 | Pro                 | Pro                 | Arg                  | Arg                 | Lys                                  | ਤੁ                                   |                  |                  |           |                  | _                |              |           |           |                  |           |                  |           |                  |                  |                 |
|                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     | ·                   |                      |                     |                                      |                                      |                  |                  | •         |                  |                  |              |           |           |                  |           |                  |           |                  |                  |                 |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                                      |                                      |                  |                  |           |                  |                  |              |           |           |                  |           |                  |           |                  |                  |                 |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                                      |                                      |                  |                  |           |                  |                  |              |           |           |                  |           |                  |           |                  |                  |                 |
|                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | -                    |                     | -                                    | -                                    |                  |                  |           |                  |                  |              |           |           |                  |           |                  |           |                  |                  |                 |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                                      |                                      |                  |                  |           |                  |                  |              |           |           |                  |           |                  |           |                  |                  |                 |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                                      |                                      |                  |                  |           |                  |                  |              |           |           |                  |           |                  | _         |                  |                  |                 |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                                      |                                      |                  |                  |           |                  |                  |              |           |           |                  |           |                  |           |                  |                  |                 |

| L0637: 1, L0761: 1,<br>L0646: 1, L0773: 1,<br>L0363: 1, L0774: 1,<br>L0558: 1, L0384: 1,<br>L0543: 1, L0566: 1,<br>L0663: 1, H0547: 1,<br>H0593: 1, H0684: 1,<br>H0593: 1, H0684: 1,<br>H0710: 1, S0152: 1,<br>H0710: 1, S0152: 1,<br>H074: 1, L0740: 1,<br>L0744: 1, L0740: 1, |  |
|---|--|
|   | Asp-7 to Ala-15, Pro-34 to Ile-60, Gln-110 to Asn-117. |
|   | 2732   |
|   | 122 - 751  |
|   | 557  |
|   | 1020130  |
|   | HPDRZ03  |

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|   | :  |
| H0457: 1, H0328: 1,<br>L0055: 1, H0169: 1,<br>F0067: 1, S0422: 1,<br>L0763: 1, L0773: 1,<br>L0363: 1, L0804: 1,<br>L0806: 1, L0663: 1,<br>H0648: 1, S0152: 1,<br>L0751: 1, L0756: 1,<br>L0758: 1, L0593: 1,<br>L0758: 1, L0593: 1,<br>L0594: 1, H0665: 1, | L0777: 7, L0759: 5, L0638: 3, L0766: 3, L0439: 3, L0666: 2, L0666: 2, L0666: 2, L0666: 2, L0667: 1, L0471: 1, H0628: 1, L0761: 1, L0764: 1, L0764: 1, L0364: 1, L0803: |
|   |  |
|   |  |
|   | 2733   |
|   | 3745 -<br>2963   |
|   | 558  |
|   | 1020180  |
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|---------------------|---------------------|------------------------|-----------|------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| L0740: 1, L0749: 1, | L0750: 1, L0757: 1, | L0594: 1, L0595: 1 and | S0026: 1. | S0330: 109, S0328: 51, | S0446: 12, L0659: 5, | L0666: 4, L0779: 4, | S0456: 4, L0717: 3, | L0775: 3, H0593: 3, | L0748: 3, L0439: 3, | L0747: 3, L0749: 3, | L0758: 3, L0021: 2, | H0615: 2, L0662: 2, | L0766: 2, L0803: 2, | L0663: 2, L0665: 2, | S0310: 2, H0658: 2, | H0648: 2, S0406: 2, | L0740: 2, L0731: 2, | L0595: 2, H0624: 1, | H0662: 1, S0376: 1, | H0351: 1, H0411: 1, | H0587: 1, L0022: 1, | L0105: 1, H0688: 1, | H0617: 1, L0455: 1, | H0494: 1, S0352: 1, | S0464: 1, S0440: 1, | S0422: 1, L0772: 1, | L0646: 1, L0771: 1, | L0773: 1, L0649: 1, | L5569: 1, L0499: 1, |
|                     |                     |                        |           |                        |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        |           | 2734                   |                      |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        |           | 2 - 535                |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        |           | 529                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |
|                     |                     |                        |           | 1020832                |                      | -                   |                     |                     |                     |                     |                     |                     |                     |                     | :                   |                     | ٠                   |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
|                     | _                   |                        |           | HNKDT10                |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| L0375: 1, L0651: 1,<br>L0784: 1, L0806: 1,<br>L0509: 1, L0655: 1,<br>L0809: 1, L0545: 1,<br>L0790: 1, L0791: 1,<br>L0792: 1, L0664: 1,<br>H0144: 1, H0519: 1,<br>S0126: 1, S0404: 1,<br>H0555: 1, L0751: 1,<br>L0777: 1, S0436: 1 and<br>L0592: 1. | L0747: 5, L0805: 3,<br>L0761: 2, L0803: 2,<br>L0775: 2, H0658: 2,<br>L0758: 2, S0298: 1,<br>H0586: 1, H0597: 1,<br>L0646: 1, L0776: 1,<br>L0518: 1, L0519: 1,<br>L0528: 1, L0529: 1,<br>L0790: 1, L0666: 1,<br>H0690: 1, H0521: 1, | L0803: 13, L0766: 10,<br>L0731: 8, L0751: 6,<br>L0601: 6, L0756: 5,<br>L0764: 4, L0789: 4,<br>S0136: 4, H0436: 4,<br>L0777: 4, L0596: 4,<br>H0556: 3, H0580: 3,  |
|--|--|--|
|  | Gly-7 to Leu-15,<br>Pro-17 to His-29.  | Thr-15 to Trp-23, L0803: 13, L0766: Ala-44 to Gln-51, L0731: 8, L0751: 6, Lys-62 to Arg-70, L0601: 6, L0756: 5, Asp-102 to Lys-114, L0764: 4, L0789: 4, Val-116 to Ala-148, S0136: 4, H0436: 4, Phe-151 to Glu-163. L0777: 4, L0596: 4, H0556: 3, H0580: 3 |
|  | 2735   | 2736   |
|  | 3 - 113  | 157 - 681  |
|  | 260  | 561  |
|  | 1020841  | 1020852  |
|  | HWHG025  | HWMNE31  |

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| H0328; 3, H0615; 3, | H0090: 3, L0775: 3, | .0666: 3, L0747: 3, | L0755: 3, L0758: 3, | 30412: 3, H0341: 2, | S0376: 2, H0393: 2, | H0549: 2, H0431: 2, | H0587: 2, H0013: 2, | .0021: 2, H0597: 2, | H0014: 2, H0644: 2, | .0800: 2, L0773: 2, | .0662: 2, L0784: 2, | .0805: 2, L0438: 2, | 10520: 2, H0648: 2, | L0748: 2, L0439: 2, | .0740: 2, L0604: 2, | H0265: 1, H0685: 1, | S0114: 1, H0657: 1, | H0656: 1, H0661: 1, | H0663: 1, H0402: 1, | 30358: 1, S0444: 1, | S0360: 1, S0045: 1, | H0351: 1, L0394: 1, | S0222: 1, H0333: 1, | H0575: 1, H0318: 1, | H0421: 1, H0052: 1, | F0103: 1, H0570: 1, | H0024: 1, H0083: 1, | H0067: 1, H0188: 1, | S0003: 1, S0214: 1, |
|                     |                     |                     |                     |                     |                     | =                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u></u>             |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |
|                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | <u>·</u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     | ,                   |                     |                     | -                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     | <u>.</u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|--|
| H0622: 1, H0673: 1, | L0456: 1, H0163: 1, | H0591: 1, H0040: 1, | HQ551: 1, T0067: 1, | H0412: 1, H0560: 1, | H0647: 1, S0142: 1, | S0208: 1, S0422: 1, | H0695: 1, L0369: 1, | L0520: 1, L0763: 1, | L0770: 1, L0638: 1, | L0771: 1, L0794: 1, | L0774: 1, L0651: 1, | L0378: 1, L0776: 1, | L0657: 1, L0809: 1, | <br>L0664: 1, L0665: 1, | H0144: 1, H0725: 1, | H0659: 1, H0666: 1, | H0518: 1, H0521: 1, | S0013: 1, H0696: 1, | \$0406: 1, \$3014: 1, | S0027: 1, L0754: 1, | L0749: 1, L0752: 1, | L0757: 1, S0260: 1, | L0592: 1, S0026: 1, | S0276: 1, H0542: 1, | H0423: 1, H0422: 1 and | H0721: 1. | H0484: 35, L0751: 15,<br>L0758: 12, H0483: 10, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                        |           |  |
|                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                        |           | 2737   |
|                     |                     |                     |                     |                     |                     |                     |                     | _ ***               |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                       | •                   |                     |                     |                     |                     |                        |           | 1 - 420  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                        |           | 295  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                        |           | 1020878  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                        |           | HUSY 175                                       |

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| %;                  | 7,                  | 6,                  | : 6,                | .6,                 | 6,                  | :5,           | . 5,                | .5,                 | 4,                  | . 4,                | .4,                 | .4,                 | . 4,                | . 4.<br>-           | 4,            | 3,                  | .3,                 | .3,                 | .3,                 | ;3,                 | : 3,                | : 3,                | :3,                 | .3,                 | .2,                 | .2                  | 2,                  | .2,                 | : 2,             |
| .0743: 9, H0370: 8, | S0442: 7, S0126: 7, | S0436: 7, S0420: 6, | .0766: 6, H0670: 6, | 10672: 6, L0744: 6, | .0779: 6, S0434: 6, | 61: 5, S0476  | H0617: 5, H0660: 5, | 30027: 5, L0747: 5, | .0592: 5, S0040: 4, | H0716: 4, H0662: 4, | 30140: 4, H0545: 4, | H0150: 4, S0440: 4, | H0641: 4, H0689: 4, | H0682: 4, H0684: 4, | 30: 4, S0406: | 33014: 4, S0356: 3, | H0729: 3, H0733: 3, | S0007: 3, H0639: 3, | H0123: 3, H0424: 3, | 30366: 3, H0087: 3, | 10647: 3, L0769: 3, | J0775: 3, H0690: 3, | H0696: 3, S3012: 3, | .0740: 3, H0543: 3, | .0600: 3, H0713: 2, | H0663: 2, S0376: 2, | S0444: 2, S0408: 2, | S0046: 2, H0619: 2, | S0300: 2, S0278: |
| 7,07                | S04                 | S043                | 1076                | 90H                 | 107                 | 90H           | 90H                 | 2003                | 105                 | H07                 | S01                 | H01                 | 90H                 | H06                 | S03           | S30]                | H07                 | 2000                | H01                 | S03                 | 90H                 | 1.07                | 90H                 | L07                 | 106                 | 90H                 | S04                 | 200                 | 203              |
|                     |                     |                     |                     |                     |                     |               |                     |                     |                     |                     |                     |                     |                     |                     |               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |
|                     |                     |                     |                     |                     |                     |               |                     |                     |                     |                     |                     |                     |                     |                     |               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |
|                     |                     | <del></del>         |                     | ·                   |                     |               | · · · · · ·         | <del>,</del>        | <del>.</del>        |                     |                     |                     |                     |                     |               |                     |                     | ,                   |                     |                     |                     | ············        |                     |                     | — <del>*</del>      |                     |                     | <u>-</u> -          |                  |
|                     | -                   | _                   |                     | <del></del> .       |                     | <del></del>   |                     |                     |                     |                     |                     |                     |                     |                     | •             |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                  |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |             |                  |                  |                    |                  |                  |                  |                  |                  |             |                  |                  |                  |                  |                  |
|                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                  |                  |                  | .—_              | •           |                  |                  |                    |                  |                  |                  | <del></del>      |                  |             |                  |                  |                  |                  |                  |
| 0052: 2,            | 0688: 2,            | 0674: 2,            | 0100: 2,            | 0771: 2,            | 0633: 2,            | 0520: 2,            | 0658: 2,            | 0436: 2,            | )748: 2,            | 0731: 2,            | 0759: 2,         | 0686: 1,         | 0294: 1,         | 0657: 1,         | 0180: 1,    | 0254: 1,         | 354: 1,          | 0722: 1,           | )132: 1,         | 0550: 1,         | 0333: 1,         | 0101: 1,         | 10575: 1,        | T0048: 1,   | 0581: 1,         | 0309: 1,         | 10231: 1,        | [0178: 1,        | 0024: 1,         |
| H0592: 2, H0052: 2, | .0157: 2, H0688: 2, | H0606: 2, H0674: 2, | 10059: 2, H0100: 2, | .0763: 2, L0771: 2, | .0649: 2, L0633: 2, | .0383: 2, H0520: 2, | 10435: 2, H0658: 2, | H0448: 2, H0436: 2, | 50390: 2, L0748: 2, | .0777: 2, L0731: 2, | J0757: 2, L0759: | S0260: 2, H0686: | S6024: 1, H0294: | S0134: 1, H0657: | 10656: 1, S | S0212: 1, H0254: | S0418: 1, S0354: | S0410: 1, H0722: 1 | S0045: 1, S0132: | H0393: 1, H0550: | H0587: 1, H0333: | F0109: 1, H0101: | H0427: 1, H0575: | H0706: 1, T | S0474: 1, H0581: | S0049: 1, H0309: | H0597: 1, H0231: | H0009: 1, H0178: | H0567: 1, H0024: |
|                     | <u></u>             | <u> </u>            | <u> </u>            | <u>l</u>            | 닖.                  | <u></u>             | <u> </u>            | <u>; = </u>         | S                   | 므.                  |                  | S                | S                | S                | <u>;14</u>  | S                | S                | S                  | S                | <u>-4-i</u>      | <u>;11;</u>      |                  | <u>- 14 </u>     | <u>. 11</u> | ~~               | <u> </u>         |                  | <u>. 144.</u>    | F                |
|                     |                     |                     |                     | ;                   |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  | -           |                  |                  |                    |                  |                  |                  |                  |                  |             |                  |                  |                  |                  |                  |
| <br> <br>           |                     |                     |                     | ·<br>·              |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |             |                  |                  |                    |                  |                  |                  |                  |                  |             |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                  |                  |                  |                  |             |                  |                  |                    | ,                | •                |                  |                  |                  |             |                  |                  |                  |                  |                  |
|                     |                     |                     |                     | •                   |                     |                     |                     | _                   |                     |                     |                  |                  |                  |                  |             |                  |                  |                    |                  |                  |                  |                  |                  |             |                  |                  |                  |                  |                  |
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|                     | <del></del>         | <u></u>             | _ |                     |                     |                     |                     | ·            |                     | •                   |                     |                     | <br>                |                     |                     |                     |                     |                     |                     |                     |                     |                     | and                |           |                    | <del></del>         |                     |                     |
| H0051: 1. H0099: 1. | H0594: 1, H0188: 1, | S0214: 1, H0604: 1, |   | H0673: 1, H0551: 1, | H0412: 1, H0413: 1, | H0494: 1, H0334: 1, | S0150: 1, S0426: 1, | <del>_</del> | L0374: 1, L0764: 1, | L0385: 1, L0774: 1, | L0375: 1, L0654: 1, | L0657: 1, L0659: 1, | L0665: 1, H0702: 1, | H0519: 1, H0683: 1, | S0328: 1, S0330: 1, | H0539: 1, S0378: 1, | H0522: 1, S0037: 1, | S0028: 1, S0206: 1, | L0754: 1, L0750: 1, | H0445: 1, H0595: 1, | L0591: 1, L0361: 1, | L0601: 1, S0192: 1, | H0542: 1, H0423: 1 | S0456: 1. | L0439: 5, L0777: 4 | H0244: 2, S0010: 2, | S0386: 2, L0764: 2, | L0776: 2, L0809: 2, |
|                     |                     |                     |   |                     |                     |                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |           | Glu-1 to Asn-6,    | Glu-14 to Leu-19,   | Pro-22 to Ile-30,   | Ser-32 to Asp-40,   |
|                     |                     |                     |   |                     |                     | - <u>-</u> -        |                     |              |                     |                     |                     |                     | <br>                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |           | 2738               |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                     | •            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |           | 2 - 1018           |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |           | 563                |                     |                     |                     |
|                     |                     |                     |   |                     | •                   |                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |           | 1020904            |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                     |              |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |           | HSDFS07            | .•                  |                     |                     |

| H0519: 2, L0756: 2,<br>L0780: 2, H0369: 1,<br>S0222: 1, S0346: 1,<br>H0050: 1, H0428: 1,<br>L0194: 1, L0455: 1,<br>H0494: 1, L0769: 1,<br>L0806: 1, L0807: 1,<br>L0664: 1, H0520: 1,<br>L0777: 1, L0779: 1,<br>L0759: 1, S0031: 1 and | L0764: 3, S0360: 2,<br>H0331: 2, H0575: 2,<br>L0769: 2, H0670: 2,<br>L0747: 2, L0777: 2,<br>L0601: 2, S0358: 1,<br>H0455: 1, H0492: 1,<br>L0021: 1, L0763: 1,<br>L0662: 1, L0803: 1,<br>L0774: 1, L0775: 1,<br>L0809: 1, H0683: 1,<br>H0522: 1, L0743: 1, | Asn-31 to Ala-38, S0222: 2, S0214: 2, Asp-57 to Arg-64, S0320: 2, S0126: 2, Ala-75 to Asp-90, S0330: 2, L0759: 2, Gln-98 to Gly-123, L0362: 2, L0361: 2, Arg-125 to Gly-142, H0653: 2, H0220: 1, Met-155 to Gly-160, H0656: 1, H0341: 1, |
|---|---|--|
| Ser-44 to Gln-53.   | Glu 49 to Asn-62.   | Pro-5 to Lys-15, H0424: 5, L0766: Asn-31 to Ala-38, S0222: 2, S0214: 2, Asp-57 to Arg-64, S0422: 2, S0126: 2, Gln-98 to Gly-123, L0362: 2, L0361: 2 Arg-125 to Gly-142, H0653: 2, H0220: 1 Met-155 to Gly-160, H0656: 1, H0341: 1        |
| ,   | 2739  | 2740   |
|   | 620 - 378   | 811 - 2  |
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| 1, \$0376: 1, 1, H0351: 1, 1, H0497: 1, 1, L0471: 1, 1, L0055: 1, 1, H0591: 1, 1, H0591: 1, 1, H0538: 1, 1, H0538: 1, 1, H0547: 1, 1, H0547: 1, 1, H0547: 1, 1, H0547: 1, 1, L0777: 1, 1, H0547: 1, 1, L0747: 1, 1, L0591: 1, 1, L0 | 32: 3<br>33: 2<br>55: 2<br>56: 1<br>7, 7, 7, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3,  |
| 1, S0376: 1, H0351: 1, H0497: 1, L0471: 1, H0693: 1, L0655: 1, H0591: 1, L0772: 1, L0772: 1, L0772: 1, H0144: 1, H0549: 1, H0539:   | 3, AR052:<br>2, AR033:<br>1, AR050:<br>0, AR039:<br>12, S0410:<br>10591: 7,<br>10752: 4,<br>H0556: 3,  |
|   | ο, 4, 4, ε,  |
| H0449: 1, S0376: 1, S0045: 1, H0351: 1, H0587: 1, H0587: 1, H0583: 1, H0566: 1, L0471: 1, H0566: 1, L0473: 1, H0569: 1, H0569: 1, H0569: 1, L0772: 1, L0665: 1, H0144: 1, L0665: 1, H0649: 1, H0689: 1, H0672: 1, H0689: 1, H0679: 1, H0689: 1, H0679: 1, L0779: 1, L0779: 1, L0669: 1, H0679: 1, H0689: 1, H0679: 1, L0779:  | AR053: 3, AR052:<br>AR096: 2, AR033:<br>AR104: 1, AR060:<br>AR104: 0, AR050:<br>AR061: 0, AR039:<br>L0754: 12, S0410:<br>L0766: 9, L0591: 7,<br>L0748: 4, L0752: 4,<br>H0423: 4, H0556: 3<br>S0360: 3, L0646: 3, |
| 28, 26, 27, 27, 27, 27, 27, 27, 27, 27, 27, 27  | 184, AA<br>125, AA<br>268, AA<br>11<br>11<br>11<br>11<br>11  |
| Pro-1<br>Met-7<br>Asp-2-<br>Pro-2,  | e-9,<br>Thr-1<br>Lys-2<br>Asp-'  |
| 52 to 59 to 70 to   | to Ph<br>76 to<br>17 to<br>63 to   |
| Leu-162 to Pro-182, H0449: 1, S0376: 1  Arg-187 to Met-192, S0045: 1, H0351: 1  Ser-199 to Asp-219, H0587: 1, H0497: 1  Pro-224 to Pro-253. S0010: 1, L0471: 1  H0373: 1, H0083: H0266: 1, L0055: 1  H0551: 1, H0591: H0551: 1, H0538: L0770: 1, L0772: 1  L0381: 1, L0772: 1  L0653: 1, L0518: 1  L0653: 1, H0547: H0689: 1, H0547: H0689: 1, H0539: 1  L0752: 1, H0539: H0696: 1, L0747: L0759: 1  L0752: 1, L0747: L0591: 1  L0592: 1, H0216: S0396: 1.  | His-3 to Phe-9, AR053: Asn-176 to Thr-184, AR096: Glu-217 to Lys-225, AR089: Lys-263 to Asp-268. AR104: AR061: L0754 L0754 L0766: H0423: S0360:  |
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| L0527: 3, L0596: 3, | H0170: 2, H0265: 2, | S0114: 2, S0218: 2, | H0266: 2, H0615: 2, | H0056: 2, H0560: 2, | H0561: 2, L0803: 2, | .0782: 2, H0547: 2, | H0134: 2, H0436: 2, | .0756: 2, H0445: 2, | .0362: 2, H0543: 2, | .0002: 1, H0650: 1, | S0418: 1, H0208: 1, | S0046: 1, S0476: 1, | H0619: 1, H0437: 1, | H0550: 1, T0114: 1, | H0013: 1, T0048: 1, | H0318: 1, L0109: 1, | H0050: 1, L0471: 1, | S0051: 1, H0083: 1, | H0328: 1, H0622: 1, | H0604: 1, H0031: 1, | H0591: 1, H0551: 1, | H0268: 1, H0623: 1, | H0100: 1, H0132: 1, | .0763: 1, L0667: 1, | .0388: 1, L0804: 1, | .0776: 1, L0606: 1, | .0657: 1, L0659: 1, | .0542: 1, L0518: 1, | _0809: 1, L0791: 1, |
| 07                  | HO                  | 0S                  | )H                  | HC                  | H                   | <u>3</u>            | H                   | 2                   | 3                   | 27                  | <u>S0</u>           | SO                  | H                   | H                   | H                   | H                   | H                   | SO                  | H                   | H                   | H                   | H                   | H                   | 2                   | <u>3</u>            | 2                   | 3                   | 3                   |                     |
| -                   | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|   |  | 11p15                        |   |  |          |
| L0792: 1, L0793: 1,<br>H0519: 1, H0682: 1,<br>H0648: 1, S0330: 1,<br>S0152: 1, S0406: 1,<br>L0750: 1, L0779: 1,<br>L0757: 1, L0759: 1,<br>L0480: 1, H0542: 1 and<br>H0506: 1. | H0341: 1, S0222: 1,<br>H0156: 1, H0052: 1,<br>H0031: 1, L0766: 1,<br>H0658: 1, H0670: 1 and<br>L0612: 1. | H0415: 2 and H0486:          | L0755: 4, H0638: 2,<br>S0342: 1, H0101: 1,<br>H0457: 1, H0051: 1,<br>L0768: 1, L0803: 1,<br>L0650: 1, L0806: 1,<br>L0518: 1, H0689: 1,<br>H0648: 1, L0756: 1 and<br>L0759: 1. |  | H0685: 2 |
|   | Leu-2 to Gly-15,<br>Val-31 to Gly-40,<br>Gly-45 to Ala-51.   | Thr-24 to Leu-29.            | Arg-11 to Trp-20.   | Thr-10 to Arg-16,<br>Arg-21 to Ser-31,<br>Asn-97 to Arg-102,<br>Ile-170 to Ser-175,<br>Thr-207 to Gly-213. |          |
|   | 2742   | 2743                         | 2744  | 2745   | 2746     |
|   | 3 - 179  | 138 - 230                    | 311 - 370   | 54 - 800   | 272 - 3  |
|   | 267  | 268                          | 569   | 570  | 571      |
|   | 1021661  | 1021666                      | 1021682   | 1021759  | 1021794  |
|   | HPMBW86  | HOFMK02                      | ноинк71   | HCOOW23  | HACMT02  |

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| -                   |                     |                     | <u> </u> |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     | $\dashv$            |
|                     |                     |                     |          | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0754: 8, H0553: 4, | L0770: 4, L0794: 4, | H0615: 3, L0769: 3, | _        | L0777: 3, L0752: 3, | H0052: 2, L0637: 2, | L0768: 2, L0805: 2, | L0659: 2, L0666: 2, | L0664: 2, H0547: 2, | H0593: 2, H0682: 2, | H0539: 2, H0521: 2, | L0744: 2, L0757: 2, | L0604: 2, L0601: 2, | H0624: 1, H0657: 1, | H0656: 1, S0212: 1, | H0254: 1, H0662: 1, | L0005:-1, S0045:-1, | H0619: 1, H0550: 1, | H0592: 1, H0013: 1, | H0036: 1, H0618: 1, | H0620: 1, H0023: 1, | S0051: 1, H0188: 1, | H0028: 1, H0428: 1, | T0006: 1, H0213: 1, | L0455: 1, H0135: 1, | H0038: 1, H0616: 1, | H0264: 1, H0413: 1, | T0069: 1, S0038: 1, | H0100: 1, L0763: 1, | L0638: 1, L5565: 1, |
| Gln-4 to Ala-17,    | Ala-56 to Gln-61,   | Cys-166 to Ala-182. |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |
| 2747                |                     |                     | :        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |
| 2322 -              | 1756                |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 572                 |                     |                     | -        |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 1022018             |                     |                     |          |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| HISDS67             |                     |                     |          |                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|   |  |                                  |                     |  |                     |                     |  |                     |                     |  |                     |                     |                     |                     |                        |
| L0761: 1, L0667: 1,<br>L0804: 1, L0650: 1,<br>L0375: 1, L0776: 1,<br>L0807: 1, L0809: 1,<br>L0519: 1, L0663: 1, | L0665: 1, H0520: 1,<br>S0126: 1, H0684: 1,<br>H0435: 1, H0659: 1,<br>H0648: 1, S0190: 1,<br>S0404: 1, H0555: 1,<br>L0741: 1, L0751: 1, | L0747: 1, L0753: 1 and L0758: 1. | L0601: 4, H0617: 3, | L0/34: 4, L0629: 4,<br>L0657: 2, L0604: 2, | T0049: 1, S0218: 1, | L0785: 1, S0442: 1, | H0/33: 1, H0411: 1,<br>T0109: 1, H0428: 1, | H0673: 1, S0366: 1, |                     | L0/05: 1, L05/5: 1,<br>L0805: 1, L0658: 1, | H0593: 1, H0658: 1, | H0672: 1, L0743: 1, | L0740: 1, L0751: 1, | L0754: 1, L0750: 1, | L0596: 1, L0485: 1 and |
| ;   |  |                                  | Pro-1 to Gly-10,    | Pro-20 to Gly-34,<br>Pro-36 to Gly-45,     | Ala-51 to Pro-65,   | Val-78 to Arg-83,   | Gln-89 to Gly-98,<br>Lys-114 to Val-119,   | Arg-158 to Ala-164, | Thr-306 to Lys-313. |  |                     |                     |                     |                     |                        |
|   |  |                                  | 2748                |  | •                   |                     |  |                     |                     |  |                     |                     |                     |                     |                        |
|   |  |                                  | 2892 -              | 1309                                       |                     |                     |  |                     |                     |  |                     |                     |                     | <del></del>         |                        |
|   |  |                                  | 573                 |  |                     |                     |  |                     |                     |  |                     |                     |                     |                     |                        |
|   | ·  |                                  | 1022037             |  |                     |                     |  |                     |                     |  |                     |                     |                     |                     |                        |
|   |  |                                  | HOVAA59             |  |                     |                     |  |                     |                     |  |                     |                     |                     |                     |                        |

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|-----------|--|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|----------------------------|---------------------|---------------------|---|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|           |  |                     |                     |                     |                     |                        |           |                     |                     |                     |                     |                            |                     |                     |   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0721: 1. | L0766: 3, H0457: 2,<br>H0706: 1, H0015: 1, | H0373: 1, H0266: 1, |                     | H0509: 1, L0761: 1, | L0665: 1, H0144: 1, | H0689: 1, H0660: 1 and | S0328: 1. | AR089: 1, AR096: 1, | AR061: 1, AR060: 1, | AR033: 1, AR055: 0, | AR052: (            | AR104: 0                   | L0508: 9, H0620: 7, | L0774: 6, L0509: 6, | S0408: 5, L0750: 5,                     | L0601: 5, L0515: 4, | Glu-254 to Leu-262, L0512: 4, H0594: 3, | L0805: 3, L0514: 3, | L0511: 3, H0670: 3, | L0755: 3, H0556: 2, | H0686: 2, S0358: 2, | S0444: 2, H0199: 2, | H0181: 2, H0617: 2, | H0494: 2, L0505: 2, | L0502: 2, L0769: 2, | L0803: 2, L0809: 2, | L0528: 2, L0663: 2, | L0752: 2, H0657: 1, |
|           | Pro-1 to Glu-14,<br>Pro-26 to Val-33,      | 4,                  | Pro-188 to Ser-196. |                     |                     |                        |           | Gln-19 to Asp-38,   | Pro-46 to Thr-55,   | Leu-96 to Gly-104,  | Ala-114 to Ala-119, | Gln-125 to Trp-131, AR104: | Pro-133 to Pro-141, | Phe-144 to Glu-150, | Glu-180 to Val-185, S0408: 5, L0750: 5, | Glu-192 to Glu-197, | Glu-254 to Leu-262,                     | Met-272 to Ser-280. |                     |                     | 2                   |                     |                     |                     |                     |                     |                     |                     |
|           | 2749                                       |                     |                     |                     |                     |                        |           | 2750                |                     |                     |                     |                            |                     |                     |   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 2 - 1099                                   |                     | i                   |                     | •                   |                        |           | 1 - 840             |                     |                     | -                   | •                          |                     |                     |   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
|           | 574  |                     |                     |                     |                     |                        |           | 575                 |                     |                     |                     |                            |                     |                     |   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 1022059                                    |                     |                     |                     |                     |                        |           | 1022082             |                     |                     |                     |                            |                     |                     |   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | HOCPL72                                    |                     |                     |                     |                     |                        |           | HCOMIM05            |                     |                     |                     |                            |                     |                     |   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| •  |                                  | 11,<br>50,                                 | 000                                      | 80                     |
|--|----------------------------------|--|--|------------------------|
|  |                                  | 104311<br>109150                           | 182600,<br>245200,                       | 601208                 |
|  |                                  | 14q24.3                                    |  |                        |
| H0255: 1, S0420: 1, S0442: 1, S0442: 1, H0549: 1, H0549: 1, H0549: 1, H0036: 1, H0052: 1, H0052: 1, H0052: 1, H0052: 1, H0012: 1, S0336: 1, H0606: 1, L0499: 1, L0498: 1, L0499: 1, L0510: 1, L0510: 1, L0510: 1, L0510: 1, L0510: 1, L0513: 1, L0665: 1, L0666: 1, L0665: 1, H0660: 1, H0669: 1, R0669: | L0759: 1, S0434: 1 and H0506: 1. | L0794: 4, S0002: 2,<br>L0803: 2. H0445: 2. | H0250: 1, H0412:<br>S0344: 1, L0761: 1   | L0809: 1, H0435: 1 and |
|  |                                  | Pro-39 to Arg-45,<br>Arg-52 to Ile-60.     | Glu-87 to Cys-96,<br>Thr-108 to Ser-114, | Thr-121 to Glu-128,    |
|  |                                  | 2751                                       |  |                        |
|  | -                                | 3 - 947                                    |  |                        |
|  |                                  | 576  |  |                        |
|  |                                  | 1022162                                    |  |                        |
|  |                                  | HLYDC86                                    |  |                        |

| 1 0747: 1                    |                     | ,                   |                     |                     |                     |                     | H0253: 1 and L0767: | 1.0766: 7. 1.0769: 6. | S0418: 4, L0747: 4. | S0424: 3, H0341: 2, | S0278: 2, L0471: 2,                     | H0083: 2, H0538: 2, | L0770: 2, L0771: 2, | L0775: 2, L0809: 2, | H0520: 2, L0744: 2, | .7777 | 1.0759: 2, 1.0597: 2, | S0026: 2, H0667: 2, | H0171: 1, H0686: 1, | S0212: 1, H0125: 1, | S0420: 1, S0358: 1, | S0376: 1, S0360: 1, | S0046: 1, H0393: 1, | H0333: 1, H0575: 1, | H0581: 1, H0309: 1, | H0046: 1, H0567: 1, | H0188: 1, H0428: 1, | H0553: 1, H0135: 1, |
|------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|-------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Met 133 to Thr 141 1 0747. 1 | Asn-154 to Ala-169. | Glu-174 to His-179, | Gln-205 to Gln-213, | Pro-222 to Phe-231, | Ser-259 to Phe-265, | Leu-282 to Ser-288. |                     | 2753 Glu-7 to Leu-18. |                     | 77.                 | Gln-202 to Lys-219, S0278: 2, L0471: 2, | Ser-259 to Gly-266, | Glu-277 to His-287. |                     |                     |       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                              |                     |                     |                     |                     |                     |                     | 2752                | 2753                  | 1                   |                     |   |                     |                     |                     | *                   |       | ٠.                    |                     |                     |                     |                     |                     |                     | ,                   |                     |                     | ,                   |                     |
|                              |                     |                     |                     |                     |                     |                     | 92 - 457            | 170 - 1072            |                     |                     |   |                     |                     |                     |                     |       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                              |                     |                     |                     |                     |                     |                     | 277                 | 578                   |                     |                     |   |                     |                     |                     |                     | -     |                       |                     |                     |                     |                     |                     | -                   | ,-                  |                     |                     |                     |                     |
|                              |                     |                     |                     |                     |                     |                     | 1022167             | 1022313               |                     |                     |   |                     |                     |                     |                     |       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                              |                     |                     |                     |                     |                     |                     | HTLEP21             | HVCAS77               |                     |                     |   |                     |                     |                     |                     |       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |
| H0040: 1, T0041: 1, | L0369: 1, L0763: 1, | L0643: 1, L0764: 1, | • | L0375: 1, L0806: 1, | L0776: 1, L0655: 1, | L0783: 1, L0382: 1, | L0666: 1, H0144: 1, | H0593: 1, H0435: 1, | H0659: 1, H0660: 1, | H0666: 1, L0750: 1, | L0755: 1, L0731: 1, | L0757: 1 and H0543: 1. | H0547: 5, L0747: 4, | L0766: 3, H0328: 2, | H0551: 2, L0774: 2, | H0435: 2, H0659: 2, | H0436: 2, L0740: 2, | L0754: 2, L0759: 2, | L0596: 2, H0657: 1, | H0341: 1, S0418: 1, | S0360: 1, S0007: 1, | H0229: 1, H0486: 1, | H0013: 1, H0156: 1, | H0037: 1, L0055: 1, | L0455: 1, H0163: 1, | H0616: 1, L0060: 1, | H0560: 1, H0529: 1, | L0763: 1, L0770: 1, | L0764: 1, L0767: 1, |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                        | Thr-69 to Phe-77,   | Asp-80 to Thr-85.   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2754                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 210 - 635           |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 579                 | -                   |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1022627             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                     |                     | ٠.                  |                     |                     |                        | HOGCA79             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| L0768: 1, L0775: 1,<br>L0806: 1, L0776: 1,<br>L0659: 1, L0783: 1,<br>L0663: 1, L0664: 1,<br>H0658: 1, H0670: 1,<br>S0380: 1, H0522: 1,<br>H0134: 1, S0392: 1,<br>H0345: 1, L0777: 1,<br>L0780: 1, L0731: 1 and<br>H0445: 1. | L0777: 9, H0622: 3,<br>L0771: 3, L0747: 3,<br>L0752: 3, H0657: 2,<br>L0763: 2, L0517: 2,<br>L0566: 2, L0748: 2,<br>L0590: 2, H0050: 1,<br>H0428: 1, H0687: 1,<br>H06428: 1, H0032: 1,<br>H0674: 1, S0036: 1,<br>L0520: 1, L0769: 1,<br>L0520: 1, L0769: 1,<br>L0662: 1, L0794: 1,<br>L0662: 1, L0794: 1,<br>L0775: 1, L0651: 1,<br>L0775: 1, L0659: 1,<br>L0775: 1, L0659: 1,<br>L0775: 1, L0659: 1,<br>L0772: 1, L0659: 1,<br>L0772: 1, L0789: 1, |
|---|--|
|   | Ser-3 to Gln-9, Thr-25 to Lys-40.  |
|   | 2755   |
|   | 2 - 247  |
|   | 580  |
|   | 1022663  |
|   | HSKJP93  |

|                     |                     |                     |                     |                     |                    |                         |                     | -                                       |                     | ,                   |                     | •                   |                     | <u> </u>            |                     |                     |                      |                     |                     |                     | <del></del>         | _  |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|-------------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                    |                         | _                   |   |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |  |                     |                     |                     |                     | _                   |                     | _                   |
|                     |                     |                     |                     | 1.                  | _                  | . 6,                    |                     |   |                     | ,                   | _                   |                     |                     |                     |                     |                     |                      |                     | -                   |                     |                     |  |                     | <del></del>         |                     | _                   | <del></del>         |                     |                     |
| H0670: 1, H0660: 1, | S0406: 1, S3014: 1, | .0756: 1, L0758: 1, | .0759: 1, L0595: 1, | S0011: 1 and H0712: | H0695: 414, H0580: | 44, L0777: 6, L0731: 6, | 10052: 5, L0766: 5, | .0747: 5, H0617: 4,                     | H0494: 4, S0045: 3, | H0083: 3, H0181: 3, | H0038: 3, L0637: 3, | .0779: 3, L0758: 3, | H0484: 2, H0599: 2, | 30049: 2, H0428: 2, | .0774: 2, L0775: 2, | .0518: 2, L0439: 2, | .0750: 2, L.0596: 2, | .0588: 2, L0599: 2, | .0601: 2, H0265: 1, | H0556: 1, T0002: 1, | S0040: 1, H0294: 1, | H0341: 1, H0254: 1,                                      | H0255: 1, S0420: 1, | S0444: 1, S0360: 1, | H0208: 1, H0492: 1, | .0623: 1, H0013: 1, | S0280: 1, H0156: 1, | .0021: 1, S0010: 1, | H0194: 1, H0046: 1, |
| Hi (                | <u></u>             |                     |                     | S                   | Asn-58 to Thr-64,  | Ile-72 to Ser-78, 4     | 28,                 | Thr-185 to Leu-200. L0747: 5, H0617: 4, | <u>.</u>            |                     |                     |                     | <u>,+-i</u>         | <u>.</u>            | <u></u>             |                     |                      |                     |                     | <u> </u>            | <u>S</u>            | <u>, <del>, , , , , , , , , , , , , , , , , , </del></u> | يبنو                | <u>0</u>            |                     | <u></u>             | <u> </u>            | <u> </u>            | 1                   |
|                     |                     |                     |                     |                     | 2756               |                         |                     |   |                     |                     |                     |                     |                     | ,                   |                     |                     |                      |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |
|                     | -                   |                     |                     |                     | 106 - 705          |                         |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |  |                     |                     |                     | •                   |                     |                     |                     |
|                     |                     |                     |                     |                     | 581                |                         |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | 1022719            |                         |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | HAZAA64            |                         |                     |   |                     |                     |                     |                     |                     |                     |                     | _                   |                      |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |

|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 182600              |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| :  |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 14q24.1             |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0200: 1, H0051: 1,<br>H0510: 1, H0375: 1, | H0266: 1, H0188: 1, | S0036: 1, H0087: 1, | H0412: 1, H0102: 1, | T0042: 1, L0475: 1, | H0130: 1, L0769: 1, | L0768: 1, L0794: 1, | L0651: 1, L0776: 1, | L0807: 1, L0665: 1, | S0374: 1, H0520: 1, | H0689: 1, H0690: 1, | H0659: 1, H0660: 1, | H0672: 1, S0328: 1, | H0522: 1, H0696: 1, | S3012: 1, S0028: 1, | L0749: 1, L0755: 1, | L0759: 1, L0608: 1, | L0604: 1, S0011: 1 and | H0543: 1. | S0406: 9, L0754: 9, | L0747: 9, L0752: 9, | H0556: 7, L0742: 7, | L0758: 7, S0410: 6, | H0658: 6, L0779: 6, | H0656: 5, S0444: 5, | S0360: 5, H0660: 5, | H0657: 4, H0255: 4, | H0545: 4, H0012: 4, | H0620: 4, H0708: 4, |
|  |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Thr-11 to Arg-16,   | Asn-78 to Asp-84.   |                     |                     |                     |                     |                     |                     |                     |                     |
|  | -                   |                     | _                   |                     | _                   | _                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                        |           | 2757                |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | -                   |                     |                     |                        |           | 140 - 430           |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 285                 |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|  | <u>-</u>            |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | ٠.                  |                     |                     |                        |           | 1022904             |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HSEBD72             |                     |                     |                     |                     |                     |                     | •                   |                     |                     |

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|---------------------|---------------------|------------------|------------------|------------------|---------------------|---------------------|-------------|----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------|-------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|------------------|---------------------|-------------|
|                     |                     | <u></u>          |                  |                  |                     |                     |             | <del>-</del> - |                     |                     |                     |                     | _                   |                     |                     |                     | <del></del> . |             |                     |                     |                     |                     |                     |                     |                    |                    |                  |                     |             |
| 0731: 4,            | 10662: 3,           | 0597: 3,         | 10615: 3,        | 10428: 3,        | 0422: 3,            | 0769: 3,            | 0670: 3,    | 3012: 3,       | 0116: 2,            | 0420: 2,            | 0333: 2,            | 10050: 2,           | 10383: 2,           | 10124: 2,           | 10561: 2,           | 0371: 2,            | 0662: 2,      | 0528: 2,    | 10684: 2,           | 10659: 2,           | 0521: 2,            | 0748: 2,            | 0745: 2,            | 0780: 2,            | 10445: 2,          | 10136: 2,          | 10422: 2,        | 0114: 1,            | S0110: 1,   |
| L0744: 4, L0731: 4, | H0423: 4, H0662: 3, | L0622: 3, H0597: | H0199: 3, H0615: | H0688: 3, H0428: | S0440: 3, S0422: 3, | H0529: 3, L0769: 3, | L0768: 3, H | H0134: 3, S    | L0743: 3, S0116: 2, | H0125: 2, S0420: 2, | S0046: 2, H0333: 2, | H0486: 2, H0050: 2, | H0023: 2, H0383: 2, | H0673: 2, H0124: 2, | H0413: 2, H0561: 2, | S0438: 2, L0371: 2, | L0772: 2, L   | L0776: 2, L | H0593: 2, H0684: 2, | H0435: 2, H0659: 2, | S0328: 2, H0521: 2, | S3014: 2, L0748: 2, | L0740: 2, L0745: 2, | L0750: 2, L0780: 2, | L0757: 2, H0445: 2 | H0668: 2, H0136: 2 | H0216: 2, H0422: | H0265: 1, S0114: 1, | H0650: 1, S |
|                     |                     |                  |                  |                  | •                   |                     |             |                |                     |                     |                     |                     |                     |                     |                     |                     |               |             |                     |                     |                     |                     |                     |                     | ,                  |                    |                  |                     |             |
|                     |                     |                  |                  |                  |                     | _                   |             |                |                     |                     |                     |                     |                     |                     |                     |                     |               |             | /                   |                     |                     |                     |                     |                     |                    |                    |                  |                     |             |
|                     | •                   |                  |                  |                  |                     |                     |             |                |                     |                     |                     |                     | •                   |                     |                     |                     |               |             |                     |                     |                     |                     |                     |                     |                    |                    |                  |                     |             |
|                     |                     |                  |                  |                  |                     |                     |             |                |                     |                     |                     |                     |                     | •                   |                     |                     |               |             |                     |                     |                     |                     |                     |                     |                    |                    |                  |                     |             |
|                     |                     |                  |                  |                  |                     |                     |             |                |                     |                     |                     |                     |                     |                     |                     |                     |               |             |                     |                     |                     |                     |                     |                     |                    |                    |                  |                     |             |
|                     |                     |                  |                  | <del>-</del>     |                     |                     |             |                |                     |                     |                     |                     |                     |                     |                     |                     |               |             |                     |                     |                     |                     |                     |                     |                    |                    |                  | •                   |             |

|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                            |   |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------------|---|---------------------|---------------------|
| H0484: 1, H0483: 1, | H0254: 1, H0661: 1, | H0663: 1, H0402: 1, | S0356: 1, S0354: 1, | S0358: 1, S0376: 1, | 10722: 1, S0468: 1, | 0007: 1, S0045: 1, | S0278: 1, S0222: 1, | H0370: 1, H0613: 1, | 10600: 1, T0039: 1, | 00040: 1, T0112: 1, | H0013: 1, H0253: 1, | H0318: 1, H0235: 1, | H0327: 1, H0530: 1, | H0081: 1, L0471: 1, | H0197: 1, H0246: 1, | S0050: 1, H0373: 1, | H0275: 1, H0083: 1, | H0266: 1, T0006: 1, | H0033: 1, H0604: 1, | H0553: 1, H0617: 1, | H0376: 1, S0036: 1, | H0135: 1, H0090: 1, | H0038: 1, H0634: 1, | H0087: 1, H0059: 1, | H0100: 1, H0494: 1, | S0464: 1, S0142: 1,        | - | .0761: 1, L0764: 1, | .0771: 1, L0773: 1, |
|                     | <u>H</u>            | H                   | S                   | Š                   | <u>T</u>            | S                  | Š                   | <u> </u>            | <u> </u>            | <u>[</u>            | <u>E</u> .          | <u>. E.</u>         | <u> </u>            | <u> </u>            | <u>.E.</u>          | S                   | <u>=</u>            | <u> </u>            | <u> </u>            | <u>, E</u>          | <u> </u>            | 프                   | 正                   | <u> </u>            | <u> </u>            | S                          | S |                     |                     |
|                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                            |   |                     |                     |
|                     |                     |                     |                     |                     | ··                  | <del>,,</del>      | ···                 |                     |                     |                     | •                   | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                            |   |                     |                     |
|                     | •                   | _                   |                     |                     |                     | _                  |                     |                     | _                   | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                            | , |                     |                     |
|                     | <del>.</del>        |                     |                     |                     | ····                |                    |                     |                     |                     | <u></u>             |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     | <del>.,.</del>      |                     | _                   |                     |                     | <del>,, ,, , , , , ,</del> |   |                     |                     |
|                     |                     |                     |                     |                     |                     | -                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •••••               |                     |                     |                            |   |                     |                     |

| <u></u>   |  |
|---|--|
|   | 190100,<br>200150,<br>229300,<br>229300,<br>600429,<br>600974,<br>600998,  |
|   | 9q13-q21   |
| L0521: 1, L0626: 1,<br>L0767: 1, L0649: 1,<br>L0774: 1, L0375: 1,<br>L0806: 1, L0807: 1,<br>L0665: 1, H0529: 1,<br>L0665: 1, H0520: 1,<br>S0126: 1, H0690: 1,<br>H0709: 1, S0152: 1,<br>S0044: 1, S0404: 1,<br>H0555: 1, S0027: 1,<br>S0028: 1, S0027: 1,<br>H0444: 1, L0596: 1,<br>H0444: 1, L0596: 1,<br>H0542: 1, H0543: 1 and<br>H0542: 1, H0543: 1 and | AR096: 1, AR104: 1, AR052: 0, AR060: 0, AR089: 0, AR039: 0, AR061: 0, AR055: 0, AR033: 0 L0740: 18, H0521: 15, S0003: 14, L0777: 13, L0754: 12, L0756: 12, H0710: 11, L0747: 10, L0766: 9, L0438: 9, L0750: 7, L0752: 7, H0622: 6, H0522: 6, L0439: 6, L0757: 5, S0136: 5, L0775: 5, |
|   | Trp-1 to Ser-8, His-11 to Asn-16, Gln-19 to Pro-25, Gly-38 to Gly-44, Leu-54 to Arg-62, Ser-70 to Asp-78, Gln-83 to Ser-88, Thr-99 to Asn-105, Ser-123 to Val-135, Pro-143 to Arg-169, His-194 to Tyr-206.   |
|   | 2758   |
|   | 380 - 1066   |
|   | 583  |
|   | 1022911  |
|   | HDPY E27   |

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|                     |                  |                     |                     |                     |                     |                     |                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>                                    |                     |         |                     |                     |                     |                       |                 |
|---------------------|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------|---------------------|---------------------|---------------------|-----------------------|-----------------|
|                     |                  |                     |                     |                     |                     |                     |                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |         |                     |                     |                     |                       |                 |
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|                     |                  |                     |                     |                     | _                   |                     |                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _  |                     |         |                     |                     |                     |                       |                 |
| 61: 4,              | 81:4             | 32: 4               | 70: 4,              | 4.4.4               | 59:4                | 71:3,               | 14: 3,              | 53: 3,             | 69: 3,              | 74: 3,              | 66: 3,               | 44:3                | 96: 3,              | 16: 2,              | 32: 2,              | 74: 2,              | 10: 2,              | 375: 2              | 515: 2              | 36: 2,              | 516: 2              | 94: 2  | 4:2,                | 68: 2,  | 65: 2,              | 520: 2              | 28: 2,              | 28: 2,                | 79: 2,          |
| , H06               | t, H05           | t, H00              | 1, 1.07             | l, H01              | t, H06              | , L04               | , S02               | , H05              | 3, 1.07             | 3, LO7              | 3,106                | 3, 1.07             | , S01               | 2, S01              | , H06               | 2, S04              | 2, T00              | 2, H03              | 2, H06              | 2, S00              | 2, H06              | 2, H04   | S03,                | 2, 1.07 | 2, L06              | 2, H05              | 2, S03              | S 300                 | 2, L07          |
| S0026: 5, H0661: 4, | H0638: 4, H0581: | H0052: 4, H0032: 4, | .0598: 4, L0770: 4, | .0649: 4, H0144: 4, | H0547: 4, H0659: 4, | S0360: 3, L0471: 3, | S6028: 3, S0214: 3, | .0483: 3, H0553: 3 | H0038: 3, L0769: 3, | .0764: 3, L0774: 3, | .0659: 3, L.0666: 3, | H0436: 3, L0744: 3, | .0599: 3, S0196: 3, | H0713: 2, S0116: 2, | 30408: 2, H0632: 2, | H0013: 2, S0474: 2, | .0163: 2, T0010: 2, | H0510: 2, H0375: 2, | H0271: 2, H0615: 2, | H0617: 2, S0036: 2, | H0090: 2, H0616: 2, | F0041: 2, H0494: 2,                            | S0438: 2, S0344: 2, | 662: 7  | .0776: 2, L0665: 2, | H0723: 2, H0520: 2, | H0519: 2, S0328: 2, | \$0330: 2, \$0028: 2, | 0748: 2, L0779: |
| SO                  | H                | 웊                   | <u> </u>            | <u> </u>            | 丑                   | 8                   | <u>S</u>            | <u> </u>           | H                   | <u> </u>            | <u>3</u>             | Ħ                   | <u> </u>            | H                   | <u>80</u>           | 王                   | <u> </u>            | 臣                   | H                   | 丑                   | 呂                   | <u>2</u>                                       | 8                   | 3       | 2                   | Ħ                   | Ħ                   | 80                    | 3               |
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| _                   |                  |                     |                     |                     |                     |                     |                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>.                                      </u> |                     |         |                     |                     |                     |                       |                 |
|                     |                  |                     |                     |                     |                     |                     |                     |                    |                     |                     |                      |                     |                     |                     |                     | ·-                  |                     |                     | _                   |                     | . ,                 |  |                     |         |                     |                     |                     |                       |                 |
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| $\vdash$            |                  |                     |                     | <u></u>             |                     |                     |                     |                    | _                   |                     |                      |                     |                     |                     |                     |                     | -                   |                     |                     |                     | -,                  |  |                     | -       |                     |                     |                     |                       |                 |
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|                      |                    |                     |             |                     |                    |                     | ·          | <u>.</u>           | -       |            |                  |                  | <u></u>          |                  |               |                    |            |                    |                  |                    |             | _                  |                  |                  |            | -                |                  |                     |                  |
|----------------------|--------------------|---------------------|-------------|---------------------|--------------------|---------------------|------------|--------------------|---------|------------|------------------|------------------|------------------|------------------|---------------|--------------------|------------|--------------------|------------------|--------------------|-------------|--------------------|------------------|------------------|------------|------------------|------------------|---------------------|------------------|
|                      |                    |                     |             |                     |                    |                     |            |                    |         |            |                  |                  |                  |                  |               |                    |            | ·<br>              |                  |                    |             | ,,                 |                  |                  |            |                  |                  |                     |                  |
|                      |                    |                     |             |                     |                    |                     |            |                    |         |            |                  |                  |                  |                  |               |                    |            |                    |                  |                    |             |                    |                  |                  |            |                  |                  |                     |                  |
|                      |                    |                     |             | •                   |                    |                     |            |                    |         |            |                  | -                |                  |                  | <del></del> - |                    |            |                    |                  |                    | <del></del> |                    |                  |                  |            |                  |                  |                     |                  |
| 758: 2,              | 592: 2,            | 543: 2,             | 0677: 2,    | 0171: 1,            | 040: 1,            | 0657: 1,            | 3420: 1,   | 358: 1,            | 580: 1, | 045: 1,    | 3717: 1,         | 0549: 1,         | )222: 1,         | 0614: 1,         | 0587: 1,      | 060: 1,            | )280: 1,   | 0421: 1,           | 0544: 1,         | 0150: 1,           | 0050:1,     | 0007: 1,           | 3051: 1,         | 334: 1,          | 0312: 1,   | 0006: 1,         | 0644: 1,         | 0364: 1,            | 0708: 1,         |
| .0753: 2, L.0758: 2, | 0597: 2, L0592: 2, | .0485: 2, H0543: 2, | 122: 2, H   | H0624: 1, H0171: 1, | H0556: 1, S0040: 1 | H0716: 1, H0657: 1, | 569: 1, S( | S0442: 1, S0358: 1 | 4: 1, H | 208: 1, SO | H0645: 1, L0717: | H0351: 1, H0549: | H0550: 1, S0222: | 10431: 1, H0614: | 155: 1, H     | F0040: 1, T0060: 1 | 127: 1, SI | H0706: 1, H0421: 1 | 30049: 1, H0544: | H0545: 1, H0150: 1 | 69: 1, H    | H0373: 1, N0007: 1 | H0201: 1, S0051: | S0318: 1, S0334: | 587: 1, St | H0428: 1, T0006: | H0031: 1, H0644: | H0212: 1, S0364: 1, | .0455: 1, H0708: |
| 107                  | 1.05               | 1.04<br>40.1        | H04         | H06                 | H05                | H07                 | HOE        | S04                | S04     | H02        | HOE              | HO3              | HOS              | H04              | HOH           | 700                | H07        | HO                 | 200              | HOS                | HOS         | H03                | H02              | S03              | HOC        | HO               | HO               | H02                 | 1.04             |
|                      |                    |                     |             |                     |                    |                     |            |                    |         |            |                  |                  |                  |                  |               |                    |            |                    |                  |                    |             |                    |                  |                  |            |                  |                  |                     |                  |
|                      |                    |                     |             |                     |                    |                     |            |                    |         |            |                  |                  |                  |                  |               |                    |            |                    |                  |                    |             |                    |                  |                  |            |                  |                  |                     |                  |
|                      |                    |                     |             |                     |                    |                     |            |                    |         |            |                  |                  |                  |                  |               |                    |            |                    |                  |                    |             | <u>.</u>           |                  |                  |            |                  |                  |                     |                  |
|                      |                    |                     |             |                     |                    |                     |            |                    |         |            |                  |                  |                  |                  |               |                    |            |                    |                  |                    |             |                    |                  |                  |            |                  |                  |                     |                  |
| _                    |                    |                     |             |                     |                    |                     |            |                    |         |            |                  |                  |                  |                  |               |                    |            |                    |                  |                    | -           |                    |                  |                  |            |                  |                  |                     |                  |
|                      |                    |                     | <del></del> |                     |                    | •                   |            |                    | _       |            |                  |                  | <u> </u>         |                  |               | <del>,,</del> ,    |            | <u></u>            |                  |                    |             |                    |                  |                  |            |                  |                  |                     |                  |
|                      |                    |                     |             |                     |                    |                     |            |                    |         |            |                  |                  |                  |                  |               |                    |            |                    |                  |                    |             |                    |                  |                  |            |                  |                  |                     |                  |
|                      | ٠                  |                     |             |                     |                    |                     |            |                    |         |            |                  |                  |                  |                  |               |                    | ~          |                    |                  |                    |             |                    |                  |                  |            |                  |                  |                     |                  |
|                      |                    |                     |             |                     |                    |                     | _          |                    |         |            | ·                |                  |                  |                  |               |                    |            |                    |                  |                    |             |                    |                  |                  |            |                  |                  |                     |                  |

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|------------------|------------------|----------|---------------------|---|--------------------|---------------------|----------|--------------------|--------------------|-----------------|-------------------|-----------|----------|----------|----------|------------|----------|-----------|------------------|-----------|------------------|------------------|------------------|------------------|-------|--------------------|-------|------------------|------------------|
| ļ                |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
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| L                |                  |          | •                   |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
|                  | -                |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
|                  |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          | •         |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
| _                |                  |          |                     |   |                    | _                   |          |                    |                    |                 |                   |           |          |          |          | -          |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
|                  | ÷                |          |                     | •   | •                  | •                   | •        | F. 1,              | •                  | •               |                   |           |          | •        | •        | •          |          | •         | •                | •         | ŗ                | <u>.</u>         | <b>–</b>         |                  | •     | ·                  |       | <b></b>          | •                |
| <del>4</del>     | 79:1             | 88: 1    | T0069: 1, T0004: 1, | 41: 1   | 4.1                | H0538: 1, S0210: 1, | 2: 1     | S0426: 1, UNKWN: 1 | H0529: 1, L0763: 1 | 37:1            | 30: 1             | L0646: 1  | 73: 1    | L0803: 1 | 06: 1    | 61:1       | L0526: 1 | 4.1       | 48: 1            | 52: 1     | 26: 1            | :02              | 39:              | 96: 1            | 55: 1 | 43: 1              | 45: 1 | 45: 1            | 34: 1            |
| H00              | F0067: 1, H0379: | H04      | <u>T</u> 00         | 90H   | <b>S</b> 01        | <b>S02</b>          | 2000     | Ì                  | 1.07               | 0371: 1, L0637: | .0761: 1, L.0630: | 106       |          | 108      | L0806: 1 | T06        | 105      | 1, L0544: | .0663: 1, S0148: | l, L0352: | H0593: 1, S0126: | H0435: 1, H0670: | H0648: 1, H0539: | .0602: 1, H0696: | H05   | 107                | 103   | .0755: 1, H0445: | S03              |
| 1:1,             | 7: 1,            | 4.<br>L  | 9: 1,               | 8: 1,   | 6:1,               | 8: 1,               | 2: 1,    | 6: 1,              | 9: 1,              | 1:1,            | 1: 1,             | .0372: 1, | 1: 1,    | •        | •        | 0655: 1, ] | •        | 9: 1,     | 3: 1,            | 0:1,      | 3: 1,            | 5: 1,            | 8: 1,            | 2: 1,            | 4: 1, | 8: 1,              | 1: 1, | 5: 1,            | 8: 1,            |
| Н0591: 1, Н0040: | 2006             | 1026     | 000                 | 3003  | H0646: 1, S0144: 1 | 1053                | 3042     | 3042               | 1052               | .037            | 920               | .037      | .0771: 1 | .0364: 1 | .0651: 1 | .065       | 2907     | .0809: 1  | 990              | S0310: 1  | H059             | <b>H043</b>      | H064             | 2000             | 3004  | H0478: 1, L0743: 1 | 2075  | 2015             | S0308: 1, S0394: |
|                  | <u> </u>         | <u> </u> |                     | <u>, , , , , , , , , , , , , , , , , , , </u> | <u> </u>           |                     | <u> </u> | <u> </u>           | <u> </u>           | _=              |                   |           | _=_      | ,        |          |            |          |           |                  | <u> </u>  |                  |                  |                  |                  |       |                    |       |                  | <u>•</u>         |
|                  |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
|                  |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
|                  |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  | ,                |
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| <u> </u>         |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
|                  |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
|                  |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
|                  |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
| _                | <u>.</u>         | _        |                     |   | ·<br>—             |                     |          |                    |                    |                 |                   |           |          |          | _        |            |          |           |                  | _         | <u>'</u>         |                  | _                |                  |       | _                  |       |                  |                  |
|                  |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
|                  |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
| _                |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
| 1                |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
|                  |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       |                  |                  |
| Ŀ                |                  |          |                     |   |                    |                     |          |                    |                    |                 |                   |           |          |          |          |            |          |           |                  |           |                  |                  |                  |                  |       |                    |       | <u> </u>         |                  |

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|  | 7q32   |
| L0480: 1, L0362: 1,<br>S0106: 1, S0192: 1,<br>S0242: 1, H0542: 1,<br>H0423: 1, S0424: 1 and<br>S0446: 1. | H0013: 10, H0644: 6,<br>H0144: 6, H0615: 5,<br>L0748: 4, L0777: 4,<br>H0393: 3, T0114: 3,<br>H0012: 3, H0024: 3,<br>H0529: 3, L0438: 3,<br>H0541: 2, L0439: 3,<br>H0547: 2, H0170: 2,<br>H0341: 2, L0005: 2,<br>L0471: 2, H0050: 2,<br>L0471: 2, H0630: 2,<br>L0758: 2, H0595: 2,<br>L0758: 2, H0171: 1,<br>S0212: 1, S0418: 1,<br>S0356: 1, H0619: 1,<br>H0427: 1, H0620: 1,<br>H0594: 1, H0620: 1,<br>H0594: 1, H0620: 1,<br>H0594: 1, H0626: 1,<br>H0594: 1, H0626: 1,<br>H0594: 1, H0626: 1,<br>H0597: 1, H0616: 1,<br>H0591: 1, H0616: 1,<br>H0599: 1, H0625: 1,  |
|  | Ser-35 to Gly-40,  Ser-103 to His-109, H0144; 6, H0615; 5, Tyr-151 to Gly-159, L0748; 4, L0777; 4, Pro-216 to Glu-224, H0393; 3, T0114; 3, Asn-249 to Trp-258, H0012; 3, H0024; 3, H0624; 3, L0439; 3, H0624; 2, H0170; 2, H0341; 2, L0005; 2, H0341; 2, L0005; 2, L0471; 2, H0039; 2, L0750; 2, L0471; 1, S0212; 1, S0418; 1, L0777; 1, S0222; 1, H06427; 1, H0629; |
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| H0672: 1, S0152: 1, | H0555: 1, L0742: 1, | L0779: 1, H0445: 1, | S0194: 1, H0422: 1 and | L0698: 1. | H0486: 1 and L0766: | 1. |                 | L0750: 6, L0766: 5, | L0809: 4, L0747: 4, | L0758: 4, S0354: 3, | H0617: 3, L0775: 3, | L0783: 3, H0690: 3, | S0406: 3, L0753: 3, | L0601: 3, H0255: 2, | S0007: 2, H0618: 2, | H0253: 2, H0309: 2, | H0150: 2, H0428: 2, | H0553: 2, H0494: 2, | L0770: 2, L0771: 2, | L0803: 2, L0774: 2, | L0666: 2, S0330: 2, | H0539: 2, H0134: 2, | L0777: 2, L0592: 2, | H0624: 1, H0686: 1, | H0664: 1, S0408: 1, | H0489: 1, H0580: 1, | H0351: 1, S0278: 1, | H0333: 1, H0559: 1, | S0474: 1, H0052: 1, |
|                     |                     |                     |                        |           | Ser-26 to Ser-32.   |    | Ala-2 to Thr-9. | Phe-15 to Gly-29.   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |
|                     |                     |                     |                        |           | 2760                |    | 2761            | 2762                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        |           | 195 - 533           |    | 1307 - 525      | 238 - 840           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        |           | 585                 |    | 985             | 587                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |
|                     | •                   |                     |                        |           | 1023046             |    | 1023049         | 1023227             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | -                      |           | HDTCC55             |    | H00JQ91         | HCE4K28             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|  |  | 10q26.13-<br>q26.3  |
| H0545: 1, T0003: 1,<br>H0124: 1, H0634: 1,<br>H0087: 1, H0477: 1,<br>H0412: 1, L0763: 1,<br>L0769: 1, L0761: 1,<br>L0767: 1, L0804: 1,<br>L0806: 1, L0805: 1,<br>L0659: 1, L0787: 1. | L0791: 1, H0547: 1,<br>S0126: 1, H0658: 1,<br>H0670: 1, S0328: 1,<br>S0380: 1, H0521: 1,<br>H0522: 1, L0742: 1,<br>L0744: 1, L0748: 1, | L0759: 1, L0589: 1,<br>L0581: 1, H0665: 1,<br>S0276: 1 and H0352: 1.<br>H0624: 2, H0586: 2,<br>H0031: 2, L0748: 2,<br>L0439: 2, H0171: 1,<br>S0356: 1, S0376: 1,<br>H0050: 1, H0014: 1,<br>H0051: 1, H0647: 1,<br>L0789: 1, H0144: 1,<br>H0658: 1, H0521: 1,<br>L0754: 1, L0752: 1,<br>S0436: 1, S0276: 1 and |
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|  |  | 2763  |
| *  | ·  | 2 - 1126  |
|  |  | 288   |
|  |  | 1023264   |
|  |  | HPDVY62   |

|                     |                   |               | X                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del> -       |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|-------------------|---------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| H0024: 2 and H0596: | H0081-1 H0510-1   | and H0144: 1. | H0543: 7, H0341: 6, | S0003: 5, L0740: 5, | L0747: 5, H0619: 4, | H0575: 4, H0318: 4, | S0206: 4, L0750: 4, | L0588: 4, H0542: 4, | H0265: 3, S0358: 3, | S0046: 3, H0486: 3, | H0069: 3, S0022: 3, | L0666: 3, H0556: 2, | S0116: 2, S0212: 2, | S0418: 2, S0376: 2, | S0360: 2, S0132: 2, | H0497: 2, L0471: 2, | H0090: 2, H0551: 2, | H0494: 2, H0633: 2, | S0144: 2, H0529: 2, | L0662: 2, L0655: 2, | L0664: 2, H0144: 2, | H0547: 2, S0152: 2, | L0757: 2, H0445: 2, | H0624: 1, S6024: 1, | S0114: 1, S0134: 1, | S0218: 1, H0650: 1, | H0657: 1, H0656: 1, | H0663: 1, H0662: 1, |
| Asn-19 to Asp-29,   | Leu-34 to GIy 41. |               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |
| 2764                | 3765              | }             | 2766                |                     | ٠                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
| 1 - 351             | 2_421             | 1             | 1449 - 646          | ,                   | <del>-</del>        | ,                   |                     | -                   |                     |                     |                     |                     | • •                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |
| 589                 | 200               | 3             | 591                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |
| 1023339             | 1023375           |               | 1023414             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HLHDK42             | HI DROSS          |               | HVVBI06             |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| S0420: 1, H0580: 1, S0007: 1, H0393: 1, H0441: 1, H0331: 1, H0574: 1, H0331: 1, H0004: 1, H031: 1, H0034: 1, H021: 1, H0046: 1, H0621: 1, H0046: 1, H0620: 1, H0050: 1, H0620: 1, H0050: 1, S6028: 1, H0028: 1, H0620: 1, H0028: 1, H0648: 1, H0031: 1, H0644: 1, H0031: 1, H0644: 1, H0031: 1, H0644: 1, H0646: 1, H038: 1, H0646: 1, H0421: 1, S0150: 1, H0646: 1, S0150: 1, H0646: 1, S0150: 1, L0769: 1, L0649: 1, L0779: 1, H0650: 1, H0659: 1, L0649: 1, L0779: 1, H0650: 1, H0660: 1, H0650: 1, H0660: 1, H0650: 1, H0660: 1,  |          |               |          |          |          |          |          |          |          |          | •        |   |          |        |          |          |          |          |          |         |         |          |          |        |        |        |          |          |        |         |
|---|----------|---------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---|----------|--------|----------|----------|----------|----------|----------|---------|---------|----------|----------|--------|--------|--------|----------|----------|--------|---------|
| 80420: 1, H0580: 1, 80007: 1, H0393: 1, H0674: 1, H0331: 1, H0674: 1, T0039: 1, H00574: 1, T0039: 1, H00574: 1, T0039: 1, H0064: 1, H0064: 1, H0065: 1, H0066: 1, H0060: 1, H006  |          |               |          |          |          | _        | <u></u>  |          |          | •        |          |   |          |        |          |          |          |          |          |         |         |          |          |        |        |        |          |          |        | _       |
| S0420: 1, H0580: 1, S0007: 1, H0393: 1, H0441: 1, H0331: 1, H0441: 1, H0331: 1, H0441: 1, H0331: 1, H0044: 1, H0331: 1, H0004: 1, H0531: 1, H0004: 1, H0531: 1, H0004: 1, H0009: 1, H00009: 1, L00009: 1, H000009: 1, H000009: 1, H00009  |          |               |          |          |          |          |          |          |          |          |          |   |          |        |          |          |          |          |          |         |         |          |          | •      |        |        |          |          |        |         |
| S0420: 1, H0580: 1, S0007: 1, H0393: 1, H0441: 1, H0331: 1, H0441: 1, H0331: 1, H0441: 1, H0331: 1, H0041: 1, H0427: 1, H0004: 1, H0581: 1, H0046: 1, H0052: 1, H0051: 1, H0046: 1, H0069: 1, H00646: 1, H0069: 1, H00646: 1, H0069: 1, H00646: 1, H0069: 1, H00646: 1, H00648: 1, H00648: 1, H00648: 1, H00648: 1, H00648: 1, H00648: 1, H00648: 1, H00648: 1, H00648: 1, H00648: 1, H00648: 1, H00648: 1, H00648: 1, H00648: 1, H00649: 1, L0774: 1, H00649: 1, L0774: 1, H00649: 1, L0774: 1, H0066  | _        |               |          |          |          |          |          |          |          |          |          |   |          |        |          |          |          |          |          |         |         |          |          |        |        |        |          |          |        | _       |
| S0420: 1, H05 S0007: 1, H03 H0441: 1, H02 H0574: 1, T00 H0064: 1, H02 H0052: 1, H02 H0050: 1, H02 H0050: 1, H03 H0050: 1, H03 H0050: 1, H03 H0050: 1, H03 H0051: 1, H03 H0058: 1, H03 H0058: 1, H03 H0058: 1, H04 H0058: 1, H06 H0658: 1, H06 H0658: 1, H06 H0659: 1, H06 H0650: 1, H06 H0650: 1, L07 L0372: 1, L04 H0651: 1, S04 S0015: 1, L04 H0651: 1, S04 H0651: 1, L04 H0651: 1, S04 H0651: 1, L04 H0651: 1, S04   | 80: 1,   | 93: 1,        | 31: 1,   | 39: 1,   | 27: 1,   | 81: 1,   | 251: 1,  | 15: 1,   | 09: 1,   | 520: 1,  | 173: 1,  | 28: 1,                                  | 267: 1,  | 16: 1, | 14: 1,   | 128: 1,  | 24: 1,   | 169: 1,  | 38: 1,   | 380: 1, | 112: 1, | 47: 1,   | 44: 1,   | 22: 1, | 69: 1, | 46: 1, | 74: 1,   | 38: 1,   | 26: 1, | 566: 1, |
| 80420<br>80007.<br>80007.<br>800024<br>800024<br>800024<br>800024<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027<br>800027 | 1, H05   | 1, H03        | : 1, H03 | : 1, T00 | : 1, H04 | : 1, H05 | : 1, H02 | : 1, T01 | : 1, HO( | : 1, H06 | : 1, H03 | : 1, S60                                | : 1, H02 | 1, S03 | : 1, S02 | : 1, H02 | : 1, H06 | : 1, HO] | : 1, HOC | : 1, HO | : 1, H0 | : 1, H06 | : 1, S03 | 1, S04 | •      | •      | : 1, L07 | : 1, L04 | 1, S01 | 1, HO   |
|   | S0420:   | S0007:        | H0441    | H0574    | T0114    | H0004    | H0052    | H0184    | H0046    | H0050    | H0024    | H0510                                   | H0266    | S0318: | H0028    | H0328    | H0031    | H0628    | H0598    | H0616   | H0272   | S0150    | H0646    | S0210  | 20002  | L0372  | 1.0649   | 10775    | H0519  | H0660   |
|   |          |               |          |          |          |          |          |          |          |          |          |   | ,        |        |          |          |          |          |          |         |         |          |          |        |        |        | ٠        |          |        |         |
|   |          |               |          |          |          |          |          |          |          |          |          |   |          |        |          |          |          |          |          |         |         |          |          |        |        |        |          |          |        |         |
|   |          | ,             |          |          |          |          |          |          |          |          |          |   |          |        |          |          |          |          |          |         |         |          |          |        |        |        |          |          |        |         |
|   |          |               | •        |          |          |          |          |          |          |          |          |   |          |        |          |          |          |          |          |         |         |          |          |        |        |        |          |          |        | ·       |
|   |          | •             |          |          |          |          |          |          |          |          |          |   |          |        |          |          |          |          |          |         |         |          |          |        |        |        |          |          |        |         |
|   | -        |               |          |          |          |          |          |          |          |          |          | *************************************** |          |        |          | _        |          |          |          |         |         |          |          |        |        |        |          |          |        |         |
|   | _        | - ·- <u>-</u> |          |          |          |          |          |          |          |          |          |   |          |        |          |          |          |          |          |         |         |          |          |        |        |        |          | _        |        | _       |
|   |          |               |          | ٠        |          |          |          |          |          |          |          |   |          |        |          |          |          |          |          |         |         |          |          |        |        |        |          |          |        |         |
|   | <u> </u> |               |          |          |          |          |          |          |          |          |          |   |          |        |          |          |          |          |          |         |         |          |          |        |        | •      |          |          |        | _       |
|   |          |               |          |          |          |          |          |          |          |          |          |   |          |        |          |          |          |          |          |         |         |          |          |        |        |        |          |          |        |         |

|                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0672: 1, S0380: 1, | L0602: 1, H0134: 1, | S0390: 1, S3014: 1, | S0027: 1, S0028: 1, | L0748: 1, L0439: 1, | L0754: 1, L0749: 1, | L0756: 1, L0731: 1, | H0444: 1, H0595: 1, | L0595: 1, L0361: 1, | L0603: 1, H0667: 1, | H0422: 1 and S0424: 1. | H0623: 4, H0046: 3, | H0581: 2, H0023: 2, | H0083: 2, L0791: 2, | L0438: 2, H0547: 2, | H0539: 2, L0750: 2, | H0583: 1, H0341: 1, | H0125: 1, S0420: 1, | S0356: 1, H0208: 1, | S0045: 1, H0261: 1, | S0222: 1, H0592: 1, | H0635: 1, H0318: 1, | H0052: 1, L0163: 1, | H0266: 1, H0494: 1, | L0475: 1, H0538: 1, | L3904: 1, S0374: 1, | H0660: 1, H0522: 1, | H0134: 1, S0028: 1, | S0206: 1, L0439: 1, | L0753: 1, L0595: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                        | Glu-36 to Thr-44,   | His-72 to Tyr-78,   | Glu-82 to Tyr-88.   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2767                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                      | 2-319               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 592                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1023422             |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HOCME51             |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |

|                                 |                      |                     |                     |   |                     |                     | -                   |   |                     | -                                    |                     |                                     | -                   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |
|---------------------------------|----------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---|---------------------|--------------------------------------|---------------------|-------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                                 |                      |                     |                     |   |                     |                     |                     |   |                     |                                      |                     | •                                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                 |                      |                     | ,                   |   |                     |                     |                     |   |                     |                                      | •                   |                                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |
| H0542: 1, H0543: 1 and H0506: 1 | L0591: 11, H0069: 9, | H0494: 9, L0588: 7, | H0543: 7, H0657: 6, | H0318: 6, T0042: 6,                     | H0547: 6, H0556: 5, | L0665: 5, L0751: 5, |                     | Lys-305 to Tyr-312, H0050: 4, L0747: 4, | L0779: 4, H0341: 3, | H0638: 3, H0580: 3,                  | H0393: 3, H0052: 3, | H0266: 3, H0617: 3,                 | H0616: 3, H0413: 3, | H0521: 3, L0754: 3, | L0596: 3, L0362: 3, | H0422: 3, H0265: 2, | L0470: 2, H0305: 2, | H0637: 2, S0045: 2, | H0370: 2, T0109: 2, | H0156: 2, H0599: 2, | H0575: 2, H0036: 2, | H0618: 2, H0253: 2, | L0483: 2, H0181: 2, | H0038: 2, H0561: 2, | H0646: 2, L0770: 2, | L0769: 2, L0646: 2, | L0521: 2, L0662: 2, | L0768: 2, L0803: 2, |
|                                 | Leu-23 to Asp-31,    | Gln-46 to Ile-69,   | lle-120 to Lys-128, | Pro-148 to Asp-154, H0318: 6, T0042: 6, | Pro-216 to Val-223, | Asn-261 to Ala-273, | Gly-290 to Gln-299, | Lys-305 to Tyr-312,                     | Glu-341 to Ala-346, | Pro-394 to Met-404, H0638: 3, H0580: | Ser-418 to Ser-440, | Glu-442 to Gly-450 H0266: 3, H0617: | •                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | <u>.</u>            | ,                   |                     |                     |                     |
|                                 | 2768                 |                     |                     |   |                     |                     |                     |   |                     |                                      |                     |                                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                 | 1659 - 307           |                     |                     |   |                     |                     |                     |   |                     |                                      |                     |                                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
|                                 | 593                  |                     |                     |   |                     | _                   |                     |   |                     |                                      | _                   |                                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                 | 1023531              |                     |                     |   |                     |                     |                     |   |                     |                                      |                     |                                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     | •                   |                     |                     |                     |
|                                 | HPDOP74              |                     |                     |   |                     |                     |                     |   |                     |                                      |                     |                                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                     |                     |                     |                     |                     |                     |          |                    |                     |         |                  |                     |                    |                  |         |                  |         |              | •                |                  |                  |          |                  | <u>.</u>         |                  |                  |                  |                  |                  |                  |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------|--------------------|---------------------|---------|------------------|---------------------|--------------------|------------------|---------|------------------|---------|--------------|------------------|------------------|------------------|----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                     |                     |                     |                     |                     |                     |          |                    |                     |         |                  |                     |                    |                  |         |                  |         |              |                  |                  |                  |          | •                |                  |                  | ,                |                  |                  |                  |                  |
| _                   |                     |                     |                     |                     |                     |          |                    |                     |         |                  |                     |                    |                  |         |                  |         | <del>,</del> |                  |                  |                  |          |                  |                  |                  |                  |                  |                  |                  | $\Box$           |
| ļ.                  |                     |                     |                     |                     |                     |          |                    |                     |         |                  |                     |                    |                  |         |                  |         |              |                  |                  | •                |          |                  |                  |                  |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |          |                    |                     |         |                  |                     |                    |                  |         |                  |         |              |                  |                  |                  |          |                  |                  |                  |                  |                  |                  |                  |                  |
| 2,                  | . ત્                | ર્વ                 | ર્ય                 | 2,                  | ળ                   | 1,       | T,                 | <del>-</del>        | 1,      | <del>-</del>     | Į,                  | 1,                 | T,               | 1,      | 1,               | 1,      | 1,           | <del>,</del>     | l,               | <b>1</b> ,       | 1,       | l,               | ٦,               | 1,               | <u>_</u>         | 1,               | 1,               | Į,               | 1,               |
| .0653: 2, L0776: 2, | .0789: 2, L0438: 2, | .0602: 2, H0134: 2, | 30027: 2, L0743: 2, | .0587: 2, L0608: 2, | .0593: 2, S0106: 2, | 10170:   | H0294: 1, T0049: 1 | S0134: 1, S0218: 1, | 10255:  | 10669: 1, H0661: | H0662: 1, S0354: 1, | S0360: 1, L0717: 1 | 30278: 1, H0437: | 10586:  | H0587: 1, H0574: | 10492:  | .0586:       | H0635: 1, H0581: | H0251: 1, H0263: | F0110: 1, H0231: | 10544:   | H0546: 1, H0046: | H0178: 1, H0014: | H0015: 1, H0083: | H0099: 1, S0318: | H0687: 1, S0003: | H0615: 1, H0428: | r0006: 1, H0031: | H0165: 1, L0455: |
| 3. 2, L             | 9: 2, L             | 2: 2, H             | 7:2,L               | 7: 2, L             | 3: 2, S             | 12: 2, F | 4: 1, T            | 4: 1, S             | 4: 1, F | 9: 1, F          | 52: 1, S            | 0: 1, L            | 8: 1, H          | 2: 1, F | 77: 1, F         | 2: 1, F | 9: 1, L      | 5: 1, F          | il: 1, F         | 0: 1, F          | 77: 1, F | 1, F             | /8: 1, F         | 5: 1, F          | . 1, S           | 37: 1, S         | 5: 1, F          | 6: 1, F          | 55: 1, I         |
| 1.065               | L078                | 0907                | S002                | L058                | 1.059               | H054     | H029               | <b>S013</b>         | H048    | H066             | H066                | <b>S036</b>        | S0278: 1         | H059    | H058             | H063    | T003         | H063             | H025             | 101              | H032     | H054             | H017             | H001             | H00              | 390H             | H061             | <u>1000</u>      | H016             |
|                     |                     |                     |                     |                     |                     |          |                    |                     |         |                  |                     |                    |                  |         |                  |         |              |                  |                  |                  |          |                  |                  |                  |                  |                  |                  |                  |                  |
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| -                   |                     |                     |                     |                     |                     |          |                    |                     | -       |                  |                     |                    |                  |         |                  |         |              |                  |                  |                  |          |                  |                  |                  |                  |                  |                  |                  |                  |
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|                     |                     |                     |                     |                     |                     |          |                    |                     |         |                  |                     |                    |                  |         |                  |         |              |                  |                  |                  |          |                  |                  |                  |                  |                  |                  | •                |                  |
| _                   |                     |                     |                     |                     |                     |          |                    |                     |         |                  |                     |                    |                  |         |                  |         |              |                  |                  |                  |          |                  |                  |                  |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |          |                    |                     |         |                  |                     |                    |                  |         |                  |         |              |                  |                  |                  |          |                  |                  |                  |                  |                  |                  |                  |                  |
| L                   |                     |                     |                     |                     |                     |          |                    |                     |         |                  |                     |                    |                  |         |                  |         |              |                  |                  |                  |          |                  |                  |                  |                  |                  |                  |                  |                  |

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| 56: 1,           | 34: 1,             | 64: 1,      | 59: 1,             | 39: 1,             | 50: 1, | 09: 1,           | 53: 1,   | 00: 1,             | <b>t</b> 8: 1, | <b>4</b> : 1, | 75: 1,  | 34: 1,    | 54: 1,      | 59: 1,   | 32: 1,  | 38: 1,              | 53: 1, | 02: 1, | 93: 1,           | 90: 1, | 58: 1,           | 72: 1, | 39: 1,           | 22: 1,           | 26: 1,           | 19: 1,             | 58: 1,              | 50: 1,           | 45: 1,           |
| H0124: 1, S0366: | H0135: 1, H0634: 1 | 1, H02      | H0412: 1, H0059: 1 | H0102: 1, S0039: 1 | 1, H05 | H0359: 1, H0509: | 1, 1.076 | 1, L08(            | 1, L06         | 1, L07        | 1, L037 | 1, L078   | 1, L0654: 1 | •        | 1, L038 | 1, L078             | 1, L06 | 1, H07 | S0374: 1, H0593: | 1, H06 | H0435: 1, H0658: | 1, H06 | S0330: 1, H0539: | S0152: 1, H0522: | H0436: 1, H0626: | S3014: 1, L0749: 1 | .0756: 1, L0758: 1, | S0031: 1, S0260: | H0444: 1, H0445: |
| H0124:           | H0135:             | H0551:      | H0412:             | H0102:             | T0041: | H0359:           | S0150:   | L0761: 1, L0800: 1 | 10771:         | L0363:        | L0386:  | L0376: 1, | L0805: 1,   | L0606: 1 | L0384:  | L0809: 1, L0788: 1, | 10666: | H0144  | S0374:           | S0122: | H0435            | 0990Н  | S0330:           | S0152:           | H0436            | S3014:             | 1.0756              | \$0031:          | H0444            |
|                  |                    |             |                    |                    |        |                  |          | •                  |                |               |         |           |             |          |         |                     |        |        |                  |        |                  |        |                  |                  |                  |                    |                     |                  |                  |
|                  |                    |             | •                  |                    |        |                  |          |                    |                |               |         |           |             |          |         |                     |        |        |                  |        |                  |        |                  |                  |                  |                    |                     |                  |                  |
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|                  |                    |             |                    | _                  |        |                  |          |                    |                |               |         |           |             |          |         |                     |        |        |                  |        |                  |        |                  |                  |                  |                    |                     |                  |                  |
|                  |                    |             |                    |                    |        |                  |          |                    |                |               |         |           |             |          |         |                     |        |        |                  |        |                  |        |                  |                  |                  |                    |                     |                  |                  |
|                  |                    |             |                    | _                  |        |                  | ·        |                    | *              |               | ·<br>—— |           |             |          |         |                     |        |        |                  |        |                  |        |                  |                  |                  |                    |                     |                  |                  |
|                  |                    | <u> </u>    |                    |                    |        |                  |          |                    |                |               |         |           |             | ···      |         |                     |        |        |                  |        |                  |        |                  |                  |                  |                    |                     |                  |                  |
|                  |                    |             |                    |                    |        |                  |          |                    |                |               |         |           |             |          |         |                     |        |        |                  |        |                  |        |                  |                  |                  |                    |                     |                  |                  |
| -                |                    | <del></del> |                    |                    |        |                  |          |                    |                |               |         |           |             | •        |         |                     |        |        |                  |        |                  | _      |                  |                  |                  |                    |                     |                  |                  |
|                  |                    |             |                    |                    |        |                  |          |                    |                |               |         |           |             |          |         |                     |        |        |                  |        |                  |        |                  |                  |                  |                    |                     |                  |                  |
| $L_{L}$          |                    |             |                    |                    |        |                  |          |                    |                |               |         |           |             |          |         |                     |        |        |                  |        |                  |        |                  |                  |                  |                    |                     |                  |                  |

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|                     |                     |                        |                       |                     |                     |                     |                     |                                      |  |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
| H0707: 1, L0592: 1, | H0653: 1, H0665: 1, | S0276: 1 and S0424: 1. | L0731: 12, L0439: 10, | L0747: 8, L0770: 7, | L0662: 6, L0775: 5, |                     | L0769: 4, L0752: 4, | H0422: 4, H0657: 3,                  | H0656: 3, S0356: 3,                    | 80360: 3, 80222: 3, | H0318: 3, H0083: 3, | L0764: 3, L0768: 3, | L0766: 3, L0809: 3, | L0665: 3, H0547: 3, | H0682: 3, H0659: 3, | H0672: 3, L0750: 3, | L0588: 3, L0591: 3, | S0007: 2, H0581: 2, | H0644: 2, H0412: 2, | S0002: 2, S0426: 2, | L0648: 2, L0364: 2, | L0774: 2, L0375: 2, | L0655: 2, L0666: 2, | L0664: 2, H0520: 2, | H0435: 2, H0666: 2, | H0651: 2, H0521: 2, | S0027: 2, L0740: 2, | L0755: 2, L0757: 2, | L0758: 2, H0542: 2, |
|                     |                     |                        | Lys-25 to Asp-31,     | His-46 to Glu-54,   | Ser-80 to Lys-86,   | Val-109 to Lys-115, | Arg-143 to Met-149, | Lys-193 to Arg-198, H0422: 4, H0657: | His-253 to Gly-259. H0656: 3, S0356: 3 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        | 2769                  |                     |                     |                     |                     |                                      |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        | 1 - 1077              |                     |                     |                     |                     |                                      |  | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |
|                     |                     |                        | 594                   |                     |                     |                     | ,                   |                                      |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        | 1023545               | ٠                   |                     |                     |                     |                                      |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        | HMSOH12               |                     |                     |                     |                     |                                      |  |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| H0171: 1, H0556: 1, | H0686: 1, S0430: 1, | H0650: 1, H0341: 1, | S0212: 1, S0418: 1, | L0717: 1, H0411: 1, | H0610: 1, H0415: 1, | H0486: 1, H0427: 1, | H0599: 1, S0010: 1, | S0346: 1, H0596: 1, | H0046: 1, H0050: 1, | H0012: 1, H0014: 1, | H0051: 1, H0355: 1, | H0266: 1, S0250: 1, | L0483: 1, T0006: 1, | L0055: 1, H0040: 1, | H0413: 1, S0472: 1, | S0210: 1, H0695: 1, | L0598: 1, L0640: 1, | L0638: 1, L0761: 1, | L0381: 1, L0803: 1, | L0650: 1, L0651: 1, | L0378: 1, L0806: 1, | L0653: 1, L0776: 1, | L0661: 1, L0527: 1, | L0659: 1, L0529: 1, | H0144: 1, H0702: 1, | L0438: 1, H0519: 1, | H0670: 1, H0648: 1, | S0328: 1, S0044: 1, | H0694: 1, H0555: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | •                   | -                   |                     |
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|   |  |  | C 15 C C  | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~   |
|---|--|--|---|--|
|   |  |  | 123620,<br>188826,<br>600850,<br>601669   | 103050,<br>103050,<br>124030,<br>124030,<br>138981,<br>182380,   |
|   | 4  | 4  | 22q12.1   | 22q13.1  |
| H0436: 1, L0748: 1,<br>L0756: 1, L0779: 1,<br>H0595: 1, L0608: 1,<br>L0593: 1, L0595: 1,<br>L0362: 1, S0026: 1,<br>H0136: 1 and S0192: 1. | L0748: 2, L0749: 2,<br>L0731: 2, H0624: 1,<br>H0486: 1, H0309: 1,<br>L0769: 1, L0653: 1,<br>H0684: 1 and L0779: 1. |  |   | Arg-1 to Cys-7, L0439: 8, L0794: 5, Val-96 to Arg-105, L0758: 5, L0805: 4, Glu-130 to Leu-135, L0809: 4, S0358: 3, Pro-207 to Arg-225, L0769: 3, L0776: 3, Asp-231 to Cys-251, L0665: 3, L0438: 3, Pro-259 to Ile-264, H0658: 3, L0717: 2, |
|   | Thr-18 to Asn-31,<br>Lys-39 to Ser-47,<br>Ser-71 to His-76,<br>Gln-113 to Lys-120.                                 | Thr-21 to Asn-34,<br>Lys-42 to Ser-50,<br>Ser-74 to His-79,<br>Gln-116 to Lys-123. | Asn-12 to Thr-17,<br>Gln-60 to Arg-66,<br>Ser-71 to Asn-83,<br>Thr-89 to Ala-96,<br>Gln-120 to Thr-126,<br>Glu-149 to Lys-154,<br>Thr-213 to Ser-219,<br>Arg-231 to Tyr-244,<br>Trp-252 to Trp-259. | Arg-1 to Cys-7,<br>Val-96 to Arg-105,<br>Glu-130 to Leu-135,<br>Pro-207 to Arg-225,<br>Asp-231 to Cys-251,<br>Pro-259 to Ile-264,  |
|   | 2770   | 2771   | 2772  | 2773   |
|   | 866 - 507  | 3 - 371  | 27 - 818  | 1753 - 776   |
| ·   | 595  | 965  | 597   | 298  |
|   | 1023584  | 1023585  | 1023632   | 1023837  |
|   | HOPJG50  | HDUAB04  | HVCAA38   | HIBCN87  |

| 188826,<br>190040,<br>190040,<br>190040   | 231950,<br>600850   |
|---|---|
|   | 22q11.1   |
| H0052: 2, H0059: 2,<br>L0662: 2, L0803: 2,<br>L0789: 2, H0690: 2,<br>L0748: 2, H0556: 1,<br>S0114: 1, H0583: 1,<br>S0376: 1, H0600: 1,<br>H0618: 1, H0253: 1,<br>T0010: 1, H0253: 1,<br>H0617: 1, H0038: 1,<br>H0100: 1, L0768: 1,<br>L0766: 1, L0768: 1,<br>L0766: 1, L0768: 1,<br>H0547: 1, H0593: 1,<br>H0648: 1, H0670: 1,<br>H0648: 1, L0755: 1,<br>H0445: 1 and H0352: 1. | L0438: 3, L0764: 2,<br>H0659: 2, L0754: 2,<br>H0589: 1, H0580: 1,<br>H0013: 1, H0622: 1,<br>H0617: 1, T0067: 1,<br>L0767: 1, L0775: 1,<br>L0655: 1, L0659: 1,<br>L0666: 1, H0648: 1,<br>S0330: 1, H0710: 1,<br>L0748: 1, L0740: 1,<br>L0748: 1, L0753: 1, |
| Pro-294 to Pro-304, F<br>Glu-310 to Ile-316, L<br>Ser-320 to Pro-326. L<br>S<br>S<br>S<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I  | Arg-1 to Gln-7, L0438 Pro-18 to Leu-23, H0659: Asp-42 to Ile-47, H0589: Gln-56 to Glu-63, H0013: Glu-93 to Ile-105, H0617: Glu-132 to Leu-137, L0767: Ile-202 to Leu-208, L0655: Asn-220 to Lys-226, L0666: Asn-254 to Phe-259: S0330: L0748: L0748:      |
|   | 2774  |
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| L0766: 5, L0770: 2,<br>L0803: 2, L0666: 2,<br>L0747: 2, L0603: 2,<br>H0686: 1, S0420: 1,<br>L0662: 1, L0794: 1,<br>L0783: 1, L0383: 1,<br>L0809: 1, L0665: 1,<br>H0684: 1, H0658: 1 and<br>L0750: 1. | L0439: 12, L0743: 5,<br>L0747: 5, L0749: 5,<br>L0769: 4, L0794: 4,<br>L0731: 4, L0803: 3,<br>L0774: 3, L0809: 3,<br>H0254: 2, H0393: 2,<br>H0318: 2, H0040: 2,<br>L0659: 2, L0790: 2,<br>L0438: 2, L0753: 2,<br>H0423: 2, L0753: 2,<br>H0685: 1, H0341: 1,<br>H0685: 1, H0341: 1,<br>H0580: 1, L0717: 1,<br>H0580: 1, L0717: 1,<br>H0580: 1, H0643: 1,<br>H0333: 1, H0643: 1,<br>H0486: 1, H0013: 1,<br>H0486: 1, H0013: 1,<br>H0486: 1, H0013: 1,<br>H0486: 1, H0559: 1, | H0327: 1, H0046: 1,<br>H0086: 1, H0012: 1, |
|  | 2776 Cys-1 to Gln-6, Val-19 to Ala-24.  |  |
| 2775   | 2776  |  |
| 609 - 313  | 564 - 1061  |  |
| 009  | 601   |  |
| 1024069  | 1024332   |  |
| HUCPU06  | HPAME01   | :  |

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| _                |                  |                  |                    |              |              | _                | _                |          |              |              |              |                  |              |                  |                  |              |                  |                  |                     |                       |                      |                     | _                  |                     |                    |                  |                |                    | -                |
|                  |                  |                  |                    |              |              |                  |                  |          |              |              |              |                  |              |                  | •                |              |                  |                  |                     |                       |                      |                     |                    |                     | •                  |                  |                |                    |                  |
| : 1.             | . 1,<br>         | : T,             | .1,                |              | . 1,         | : 1,             | . 1,             | . 1,     | : 1,         | :1,          | :1,          | :1,              | : 1,         | .; 1,            | : 1,             | : 1,         | . 1,             | : 1,             | : 1,                | 506: 1.               | 54: 7,               | . 6,                | . 5,               | .5,                 | 4.                 | .3,              | . 3,           | .3,                | .3,              |
| S0051: 1, H0399: | H0687: 1, H0286: | H0617: 1, H0032: | H0673: 1, S0036: 1 | 5: 1, H0591: | 7: 1, H0100: | F0041: 1, H0494: | H0561: 1, H0130: | •        | 2: 1, L0804: | l: 1, L0657: | 3: 1, L0666: | .0664: 1, L0665: | 2: 1, H0547: | H0519: 1, H0682: | H0684: 1, H0521: | F. 1, H0631: | S0206: 1, L0754: | .0779: 1, L0780: | .0597: 1, H0543: 1, | H0422: 1 and H0506: 1 | L0740: 15, L0754: 7, | .0747: 6, L0777: 6, | .0662: 5, H0539: 5 | L0439: 5, L0758: 5  | .0438: 4, L0748: 4 | S0444: 3, H0031: | 3: 3, L0770: 3 | .0774: 3, L0749: 3 | .0756: 3, L0755: |
| S0051            | .890H            | H061             | H067               | H0135:       | H0087: 1     | T0041            | H056             | L0638: 1 | L0662: 1     | L0651:       | L0783: 1     | T0664            | L0352: 1     | H0519            | 7890H            | S0044: 1     | S0206            | 1,0775           | 10597               | H042                  | T017                 | 1,0747              | T0662              |                     | -                  | S0444            | H0553: 3, I    | 1.077              | L0756            |
|                  |                  |                  |                    |              |              |                  |                  |          |              |              | -            | -                | •            |                  |                  |              |                  |                  |                     |                       | Pro-1 to His-22,     | Lys-45 to Arg-59,   | Asp-77 to Pro-88,  | Ser-109 to Glu-119. |                    |                  |                | :                  |                  |
|                  |                  |                  | ٠                  |              |              |                  |                  |          |              |              |              |                  |              |                  |                  |              |                  |                  |                     |                       | 2777                 |                     |                    |                     |                    |                  |                |                    |                  |
|                  |                  |                  |                    |              |              |                  |                  |          | ,            |              |              |                  | ,            |                  |                  |              |                  |                  | •                   |                       | 3 - 392              |                     |                    |                     |                    |                  |                | ,                  |                  |
|                  |                  |                  |                    |              |              |                  |                  |          |              |              |              |                  |              |                  |                  |              |                  |                  |                     |                       | 602                  |                     |                    |                     |                    |                  |                |                    |                  |
|                  | _                |                  |                    |              |              |                  |                  |          |              |              |              | -                |              |                  |                  |              |                  |                  |                     |                       | 1024472              |                     |                    |                     |                    |                  |                |                    |                  |
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|  | •                   |                     |                     |                     |             |                     |          |                  |            |   |                  |                  |                  |  |                  |           |                  |                  |          |                  |                  | <u>.</u>   |          |          |          |          |           |                  |
|--|---------------------|---------------------|---------------------|---------------------|-------------|---------------------|----------|------------------|------------|---|------------------|------------------|------------------|--|------------------|-----------|------------------|------------------|----------|------------------|------------------|------------|----------|----------|----------|----------|-----------|------------------|
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|  |                     |                     |                     |                     |             |                     |          |                  |            |   |                  |                  |                  |  |                  |           |                  |                  |          |                  |                  |            |          |          |          |          |           |                  |
|  |                     |                     |                     |                     |             |                     |          |                  |            |   |                  |                  |                  |  |                  |           |                  |                  |          |                  |                  |            |          |          |          |          |           |                  |
|  |                     | -                   |                     |                     |             |                     |          |                  |            |   | _                |                  |                  |  | <u>.</u>         | <u> </u>  |                  |                  |          |                  |                  |            |          |          |          |          |           |                  |
|  |                     |                     |                     |                     |             |                     |          |                  |            |   |                  |                  | •                |  |                  |           |                  |                  |          |                  |                  |            |          |          |          |          |           |                  |
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| ~ ~  | ίų                  | ั้ญ์                | ų                   | 4                   | 4           | 4                   | -<br>f   | 1,               | 1,         | I,  | T                | 1,               | Ť,               | <u>,                                    </u> | 1,               | 1,        | ij.              | 1,               | 1,       | 1,               | 1,               | 1,         | 1,       | 1,       | 1,       | 1,       | ÷         | Ţ.               |
| .0757: 3, S0300: 2,<br>H0427: 2, H0046: 2. | H0123: 2, H0264: 2, | 10413: 2, L0646: 2, | .0794: 2, L0663: 2, | 10547: 2, H0672: 2, | L0779: 2,   | L0731; 2, L0362: 2, | 713:     | 54:              | 76:        | S0408: 1, H0722: 1                            | :9/              | 222:             | H0643: 1, S0280: | H0156: 1, L0105:                             | 70048: 1, H0230: | 251:      | H0545: 1, L0157: | H0014: 1, S6028: | , H0634: | 551:             | :869             | L0764:     | L0521:   | L0804:   | L0776:   | L0634:   | 1, L0783: | 999              |
| S03<br>HO                                  | H                   | ğ                   | 100                 | , HO                | 100         | 2                   | H07      | S0400: 1, S0354: | <b>S03</b> | H07   | S0045: 1, S0476: | H0393: 1, S0222: | , SO2            | 1.00   | H02              | 1, H0251: | 100              | , S6(            | HO       | H0616: 1, H0551: | 70067: 1, L0598: | 202        | 105      | 100 T    |          | Ž        | 100       | .0809: 1. L0666: |
| 7:3,                                       | 33.1                | 3:2                 | 4.2,                | 7:2                 | ,0744: 2, ] | 1:2,                | 0:1,     | 0:1,             | 8: 1,      | 8: 1,   | 5: 1,            | 3: 1             | 13: 1            | 6: 1   | 8: 1,            | 2: 1      | 5: 1             | 4: 1             | 6: 1,    | 6: 1             | 7: 1,            | 0637: 1, ] | 0773: 1, | 3: 1,    | 0806: 1, | 7: 1,    | 9: 1,     | 9.               |
| 1075                                       | 1012                | £04                 | 620                 | 1054                | 974         | .073                | 900      | 36               | 3035       | 9,000   | 900              | <b>403</b> 5     | 1064             | <b>4015</b>                                  | 7007             | H0052: 1  | 1054             | 1001             | S0036: 1 | 1061             | 000              | .063       | 770      | .0533: 1 | 080      | .0657: 1 | L0659: 1  | 080              |
| <del></del>                                |                     |                     | ㅂ                   |                     | <u> </u>    | =                   | <u> </u> | <u> </u>         | <u>U</u>   | <u>, , , , , , , , , , , , , , , , , , , </u> | <u>(V)</u>       | <u> </u>         | <u> </u>         | •  |                  | <u> </u>  | <u> </u>         | <u> </u>         | <u> </u> | <u> </u>         |                  | <u> </u>   | _=       |          |          | =        | <u> </u>  | =                |
| :  | ,                   |                     |                     |                     |             |                     |          |                  |            |   |                  |                  |                  |  |                  |           |                  |                  |          |                  |                  |            |          |          |          |          |           |                  |
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|  |                     |                     |                     |                     |             |                     |          |                  |            |   |                  |                  |                  |  |                  |           |                  |                  |          |                  | •                |            |          |          |          |          |           |                  |
|  |                     |                     |                     |                     |             |                     |          |                  |            |   |                  |                  |                  |  |                  |           |                  |                  |          |                  |                  |            |          |          |          |          |           |                  |
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|  | •                   |                     |                     |                     |             |                     |          |                  |            |   |                  |                  |                  |  |                  |           |                  |                  |          |                  |                  |            |          |          |          |          |           |                  |
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| ı  |                     |                     | ,                   |                     |             | •                   |          |                  |            |   |                  |                  |                  |  |                  |           |                  |                  |          |                  |                  |            |          |          |          |          |           |                  |
|  |                     |                     |                     |                     |             |                     |          |                  |            |   |                  |                  |                  |  |                  |           |                  |                  |          |                  |                  |            |          |          |          |          |           |                  |

|   | 148370,<br>238600,<br>238600,<br>238600,<br>600143,<br>601385,<br>602629  |
|---|---|
|   | 8p22  |
| H0519: 1, S0126: 1,<br>H0689: 1, H0658: 1,<br>H0666: 1, H0648: 1,<br>H0651: 1, S0328: 1,<br>S0152: 1, S0350: 1,<br>H0521: 1, H0696: 1,<br>S0146: 1, L0750: 1,<br>L0752: 1, L0759: 1,<br>H0445: 1, L0684: 1,<br>L0686: 1, S0434: 1,<br>S0436: 1, L0599: 1,<br>L0361: 1 and S0106: 1. | H0553: 9, H0624: 4,<br>L0471: 4, H0619: 3,<br>H0494: 3, H0520: 3,<br>H0547: 3, S0126: 3,<br>L0755: 3, H0013: 2,<br>H0031: 2, H0644: 2,<br>H0040: 2, L0659: 2,<br>L0666: 2, L0659: 2,<br>H0144: 2, H0519: 2,<br>H0670: 2, L0780: 2,<br>H0171: 1, H0661: 1,<br>S0360: 1, H0244: 1,<br>H0156: 1, L0021: 1,<br>S0010: 1, H0052: 1,<br>H0046: 1, L0163: 1,<br>S0214: 1, L0142: 1,  |
| <u> </u>  | Gly-29 to Glu-35,  Met-57 to Lys-64,  L0471: 4, H0619: 3,  Ser-104 to Ser-109, H0494: 3, H0520: 3,  Tyr-122 to Val-128, H0547: 3, S0126: 3,  Pro-144 to Asp-153, L0755: 3, H0013: 2,  Pro-244 to Gly-253, H0031: 2, H0644: 2,  Arg-323 to Pro-330. H0040: 2, L0659: 2,  L0666: 2, L0665: 2,  H0144: 2, H0519: 2,  H0670: 2, L0780: 2,  H0171: 1, H0661: 1,  S0360: 1, H0244: 1,  H0156: 1, L0142: 1,  H0046: 1, L0142: 1,  H0046: 1, L0142: 1,  H0032: 1, H0551: 1. |
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| H0059: 1, L0598: 1, | L0520: 1, L0769: 1, | L0637: 1, L0768: 1, | L0803: 1, L0804: 1, | L0653: 1, L0657: 1, | L0383: 1, H0690: 1, | H0435: 1, H0658: 1, | S0330: 1, H0518: 1, | S0152: 1, S0044: 1, | S0027: 1, L0754: 1, | L0747: 1, L0750: 1, | L0731: 1, L0608: 1, | L0593: 1, L0594: 1 and | H0667: 1. | L0601: 25, S0474: 22, | H0521: 17, S0278: 16, | H0542: 14, H0543: 13, | ĺ                   |                     | L0659: 8, H0581: 7, | H0559: 6, H0031: 6, | L0655: 6, S3014: 6, | S0027: 6, L0591: 6, | Gln-346 to Asp-352. H0657: 5, S0358: 5, | S0360: 5, H0457: 5, | H0529: 5, L0666: 5, | S0152: 5, L0748: 5, | L0731: 5, H0583: 4, | H0650: 4, H0587: 4, | H0318: 4, H0040: 4, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | lle-1 to Gln-18,      | Lys-69 to Gln-74,     | Ala-81 to Arg-86,     | Lys-102 to Lys-107, | Glu-146 to Val-153, | His-156 to Ile-161, | Glu-195 to Ser-207, | Asp-306 to Leu-316, | Ala-318 to Gly-333, | Gln-346 to Asp-352.                     | •                   |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2779                  |                       |                       |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2-1120                | •                     |                       |                     | •                   |                     |                     | -                   |                     |   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | _         | 604                   |                       |                       |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                        |           | 1024624               |                       |                       |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                        |           | HNORG50               |                       |                       |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |

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| 2: 4                | 7:4,                |                     | 5: 4,               | 5:3                 | 38: 3               | 2:3,                | 56:3               | 4.3                 | 2.3                 | 0:3,                | 1: 3,               | 4.3   | 9:3                 | 5:3                 | 0:3                 | 55: 2               | 4:2                 | 11:2,               | 37:2                | 0.2  | 36:2                | 45:2                | 24:2                | 51:2                | 4.2                 | 9: 2,               | 9.2                 | 6: 2,               | %<br>2,          |
| 3014                | .065                | 1052                | 45                  | H029                | H06                 | <b>H005</b>         | H026               | 790H                | H026                | S044                | 2076                | 9907  | 890H                | 1,075               | 2907                | H02                 | S011                | H034                | H06                 | H055   | H058                | H05                 | H04                 | H05                 | S034                | 7036                | 1007                | 1076                | 1037             |
| 4,                  | . 4, ]              | : 4, I              | . 4, 1              | 4;                  | 3,                  | : 3, I              | .3,                | . 3,                | .3                  | . 3,                | : 3, I              | : 3, ]  | : 3, 1              | 33                  | 3,                  | 1.2                 | 2,                  | :2,1                | 7,                  | :2,1   | 2,                  | 2,                  | 2,                  | 2,                  | 1:2,                | 2, ]                | . 2, ]              | 2.                  |                  |
| S0144: 4, S0142: 4, | L0646: 4, L0657: 4, | S0380: 4, H0522: 4, | .0439: 4, H0445: 4, | H0423: 4, H0295: 3, | H0656: 3, H0638: 3, | S0046: 3, H0052: 3, | H0083: 3, H0266: 3 | H0553: 3, H0644: 3, | H0551: 3, H0264: 3, | H0059: 3, S0440: 3, | S0002: 3, L0761: 3, | .0649: 3, L.0664: 3,                          | S0126: 3, H0689: 3, | H0672: 3, L0755: 3, | H0422: 3, L0600: 3, | 10624: 2, H0265: 2, | H0556: 2, S0114: 2, | S0134: 2, H0341: 2, | H0402: 2, H0637: 2, | S0045: 2, H0550: 2,                          | H0392: 2, H0586: 2, | H0250: 2, H0545: 2, | H0050: 2, H0424: 2, | H0413: 2, H0561: 2, | H0641: 2, S0344: 2, | S0426: 2, L0369: 2, | .0770: 2, L0769: 2, | ,0662: 2, L0766: 2, | .0375: 2, L0378: |
| S                   | <del>1</del>        | <u> </u>            | 卫                   | 王                   | 프                   | <u></u>             | 工                  | 王                   | 프                   | 工                   | Š                   | <u>, , , , , , , , , , , , , , , , , , , </u> | Ø                   | 프                   | 工                   | 프                   | 프                   | S                   | 正                   | Ś  | <u> </u>            | <u>·</u> <u>E</u>   | <u> </u>            | <u> </u>            | 프                   | S                   | ᆸ                   | <u>, 1</u>          | _                |
|                     |                     |                     |                     |                     |                     |                     |                    |                     | •                   |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     | ;                   |                  |
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|                     |                     | _                   |                     | <del>-</del>        | _                   |                     |                    |                     |                     |                     |                     |   |                     | _                   |                     |                     |                     |                     |                     |  |                     |                     | _                   |                     |                     |                     |                     | :                   |                  |
| _                   |                     | _                   |                     |                     |                     |                     |                    |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     | <u>.                                    </u> |                     |                     |                     |                     |                     |                     |                     |                     |                  |
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| .0653: 2, L0635: 2, | .0382: 2, H0702: 2, | H0659: 2, S0350: 2, | 37: 2, L0740 | 54: 2, L0747 | S0434: 2, S0196: 2, | H0585: 1, H0294: | T0049: 1, S0116: 1 | S0212: 1, H0484: 1, | 55: 1, H0306 | H0305: 1, H0459: 1 | S0418: 1, S0420: | .0562: 1, S0442: | S0354: 1, S0376: | S0140: 1, H0370: | H0613: 1, H0642: | H0257: 1, H0492: | H0486: 1, H0635: | H0002: 1, H0599: | H0706: 1, H0421: | S0049: 1, T0110: 1 | 41: 1, L0157 | H0023: 1, H0051: | S0051: 1, H0107: | H0375: 1, H0179: | H0271: 1, S0214: | H0039: 1, H0622: | H0628: 1, H0617: | H0090: 1, H0087: | H0488: 1, H0412: |
| 907                 | L03                 | H06                 | 008          | <u> </u>     | S04                 | HOS              | <u>T</u> 00        | 802                 | H02          | H03                | S04              | 105              | 803              | S01              | HO               | H02              | HOA              | HO               | HO.              | 200                | )OH          | HO               | <u>800</u>       | H03              | H02              | )OH              | HO               | HO               | HO               |
|                     |                     |                     |              |              |                     |                  |                    |                     |              |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  |                  |                  |                  |
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| F0042: 1, H0280: 1, | H0560: 1, H0509: 1, | H0646: 1, H0538: 1, | .0762: 1, L0638: 1, |          | L0642: 1, L0643: 1, | .0773: 1, L0648: 1, | .0363: 1, L0794: 1, | .0381: 1, L0804: 1, | L0774: 1, L0775: 1, | .0806: 1, L0805: 1, | .0776: 1, L0383: 1, | .0663: 1, H0144: 1, | H0697: 1, S0374: 1, | H0691: 1, L0438: 1, | H0519: 1, H0690: 1, | H0682: 1, H0684: 1, | H0435: 1, H0658: 1, | H0648: 1, S0328: 1, | H0539: 1, H0518: 1, | S0044: 1, H0134: 1, | H0214: 1, H0555: 1, | H0627: 1, S0432: 1, | S3012: 1, S0028: 1, | _        | .0749: 1, L0779: 1, |   | .0597: 1, L0599: 1, | L0608: 1, H0665: 1, | S0194: 1 and S0424: 1. |
| T0                  | )HO                 | HO                  | <u>3</u>            | <u>3</u> | <u>2</u>            | <u>3</u>            | <u>3</u>            | 2                   | <u>3</u>            | <u>3</u>            | <u> </u>            | 3                   | )H                  | )H                  | HC                  | )H                  | H                   | HC                  | )H                  | <u>S</u>            | H                   | )H                  | S3                  | os<br>So | <u>김</u>            | 3 | 2                   | <u>3</u>            | os                     |
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|                   |                   |                    | S0358: 10, H0584: 9, | S0420: 8, L0439: 8, | H0543: 8, H0250: 7,                     | H0618: 7, L0601: 7,                    | S0046: 6, H0424: 6,                     | H0251: 5, H0046: 5, | L0438: 5, H0435: 5, |                     | H0599: 4, H0494: 4, | H0561: 4, H0547: 4, | H0539: 4, L0748: 4, | L0751: 4, S0212: 3, | S0007: 3, H0486: 3, | H0706: 3, H0253: 3, | H0545: 3, S0036: 3, | H0040: 3, H0551: 3, | H0264: 3, H0132: 3, | H0529: 3, H0144: 3, | H0520: 3, H0448: 3, | H0445: 3, H0665: 3, | H0423: 3, H0677: 3, | H0624: 2, S0040: 2, | H0341: 2, H0484: 2, | H0125: 2, S0360: 2, | S0222: 2, H0586: 2, | H0497: 2, H0575: 2, | H0318: 2, H0052: 2, |
| Lys-28 to Thr-33, | Asn-35 to Lys-53, | Ala-98 to Glu-104. | Glu-41 to Lys-46,    | Ser-49 to Glu-55,   | Asp-109 to Arg-114, H0543: 8, H0250: 7, | His-133 to Asp-138, H0618: 7, L0601: 7 | Arg-170 to Glu-181, S0046: 6, H0424: 6, | Ala-246 to Pro-254, | Lys-282 to Ser-287, | Ala-296 to Asp-302. | •                   |                     |                     |                     |                     | <u>.</u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 2780              | -                 |                    | 2781                 |                     |   |  |   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                   |                     |
| 687 - 328         |                   |                    | 1132 - 197           |                     |   |  |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |
| 605               |                   |                    | 909                  |                     |   |  |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| 1024915           |                   |                    | 1025047              |                     |   |  |   |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HWLVR07           | -                 |                    | HOPKF60              |                     |   |  |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| H0059: 2, T0042: 2, | S0440: 2, H0641: 2, | S0210: 2, S0002: 2, | S0126: 2, H0689: 2, | H0666: 2, H0521: 2, | S0027: 2, L0752: 2, | S0434: 2, H0422: 2, | S0042: 2, S0424: 2, | H0170: 1, H0171: 1, | H0556: 1, T0002: 1, | H0218: 1, H0161: 1, | H0686: 1, S0342: 1, | H0716: 1, H0295: 1, | H0294: 1, H0656: 1, | H0483: 1, H0661: 1, | H0458: 1, H0638: 1, | H0192: 1, S0356: 1, | S0442: 1, S0376: 1, | S0444: 1, H0675: 1, | H0580: 1, S0468: 1, | H0208: 1, H0393: 1, | L0717: 1, S0278: 1, | H0261: 1, H0550: 1, | S6014: 1, H0370: 1, | H0592: 1, H0333: 1, | H0559: 1, H0256: 1, | H0485: 1, T0040: 1, | L0586: 1, H0069: 1, | H0075: 1, H0042: 1, | H0581: 1, H0121: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| 23: 1            | 12: 1            | 14:1             | 51:1             | 0: 1,            | 66: 1            | 71:1             | 86: 1        | S0022: 1, H0039: 1                            | 28: 1    | 83: 1            | 35: 1 | 80:1        | H0412: 1, H0413: 1 | 00:1     | 15: 1,      | 54: 1              | S0294: 1, S0438: 1,                            | 30:1     | 52: 1    | 4: 1,   | 58: 1    | 19: 1            | 84: 1 | 70:1             | H0660: 1, H0518: 1 | 22: 1            | 55: 1            | 47: 1            | 14: 1            |
| H01              | H00              | H00              | H00              | T001             | H02              | H02              | H02          | H00.  | H06      | H03              | H01   | H03         | H04                | H01      | <b>S001</b> | <b>S</b> 02        | S043   | H01      | 90H      | S037  | T00      | H05              | H06   | 90H              | H05                | H05              | H05              | H04              | <b>S</b> 30      |
| I: 1,            | 0:1,             | 0:1,             | .0163: 1, H0051: | l: 1,            | 3: 1,            | 9:1,             | 2: 1,        | 2: 1,   | 3: 1,    | 7:1,             | 8: 1, | 7: 1,       | 2: 1,              | 6: 1,    | 1: 1,       | 5: 1,              | 4: 1,  | 9: 1,    | 6: 1,    | #: <u>1</u> ,                                 | 5: 1,    | 3:1,             | 3: 1, | 8: 1,            | 0: 1,              | 2: 1,            | 4: 1,            | 9: 1,            | 6: 1,            |
| H0041: 1, H0123: | H0050: 1, H0012: | H0620: 1, H0014: | ,016             | S0051: 1, T0010: | H0083: 1, H0266: | H0179: 1, H0271: | 1029         | 3002  | 1055     | H0617: 1, H0383: | 1059  | <b>1008</b> | 1041               | 1005     | 7004        | H0625: 1, S0464: 1 | 3029   | 1050     | 1064     | 3034  | 056      | H0693: 1, H0519: | 1059  | H0658: 1, H0670: | 990E               | S0332: 1, H0522: | H0694: 1, H0555: | H0479: 1, H0447: | H0626: 1, S3014: |
|                  | <u> </u>         | <u> </u>         |                  | <u> </u>         | <u> </u>         | =                | <u>,==</u> - | <u>, , , , , , , , , , , , , , , , , , , </u> | <u> </u> |                  |       | <u>, ==</u> | <u> </u>           | <u> </u> |             | <u> </u>           | <u>(, , , , , , , , , , , , , , , , , , , </u> | <u> </u> | <u> </u> | <u>, , , , , , , , , , , , , , , , , , , </u> | <u> </u> |                  |       | <del></del>      |                    | <u></u>          |                  | <u> </u>         |                  |
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| <u></u>          |                  |                  |                  |                  |                  | _                |              |   |          |                  |       |             |                    |          |             |                    | _  |          |          |   |          |                  |       |                  |                    |                  |                  |                  |                  |
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| S0028: 1, L0743: 1,<br>L0744: 1, L0754: 1,<br>L0745: 1, L0747: 1,<br>L0755: 1, L0757: 1,<br>L0759: 1, H0595: 1,<br>L0596: 1, L0592: 1,<br>L0608: 1, L0593: 1,<br>H0668: 1, H0653: 1,<br>H0542: 1, H0506: 1 and |   |
|--|---|
|  | Gly-22 to Glu-28,<br>Glu-42 to Arg-60,<br>Leu-67 to Glu-89,<br>Asp-106 to Thr-118,<br>Gln-120 to Ile-130. |
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|   | 123940,                                    | 139350,             | 139350,             | 148040,             | 148041,             | 148043,             | 148070,             | 231550,             | 600194,             | 600231,             | 600536,             | 600808,             | 600956,             | 601284,             | 601769,             | 601769,             | 601928,             | 602116,             | 602153              |                     |                     |                     |                     |                        |                     |                     |                     |
|---|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|
|   | 12q12-q13                                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |
| S0308: 1, H0595: 1,<br>L0596: 1 and L0599: 1. | L0805: 3, H0657: 2,<br>L0769: 2, L0766: 2, | L0659: 2, L0809: 2, | L0789: 2, L0665: 2, | L0565: 2, H0659: 2, | L0749: 2, L0777: 2, | L0755: 2, L0596: 2, | H0685: 1, H0583: 1, | H0650: 1, H0656: 1, | H0663: 1, S0420: 1, | S0356: 1, H0619: 1, | L0717: 1, H0586: 1, | H0251: 1, H0050: 1, | H0622: 1, H0135: 1, | H0038: 1, H0551: 1, | H0272: 1, H0561: 1, | H0509: 1, L0637: 1, | L0646: 1, L0794: 1, | L0387: 1, L0776: 1, | L0655: 1, L0657: 1, | L0636: 1, L0666: 1, | L0664: 1, H0520: 1, | H0547: 1, H0519: 1, | H0672: 1, L0593: 1, | H0667: 1 and H0352: 1. | L0747: 4, L0757: 4, | L0759: 4, L0770: 3, | L0769: 2, L0659: 2, |
|   | Ala-1 to Ser-8.                            | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Pro-19 to Cys-28.   |                     |                     |
| ļ   | 2783                                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                        | 2784                | ,                   |                     |
|   | 68 - 1225                                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                        | 103 - 201           | ,                   |                     |
|   | 809  | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 609                 |                     |                     |
|   | 1025231                                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1025327             |                     |                     |
|   | HPCTY12                                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HFASF12             |                     |                     |

|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | :                   |                     |
|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |   |                     |                     | ***                 |                     | ,                   |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                   |                     |
| H0691: 2, L0750: 2, | S0116: 1, H0638: 1, | S0300: 1, H0587: 1, | • | H0529: 1, L0762: 1, | L0764: 1, L0768: 1, | L0775: 1, L0776: 1, | L0634: 1, L0783: 1, | L0663: 1, H0689: 1, | H0521: 1, S0027: 1, | L0748: 1, L0777: 1, | L0752: 1, L0755: 1, | L0731: 1, H0445: 1 and | H0423: 1. | H0556: 4, H0253: 4, | H0620: 4, L0731: 3, | S0212: 2, H0052: 2, | H0124: 2, L0766: 2, | L0809: 2, L0565: 2, | S0126: 2, S0328: 2, | L0603: 2, H0739: 1, | S0114: 1, S0218: 1, | H0657: 1, S0116: 1, | H0638: 1, S0420: 1, | S0045: 1, S0046: 1, | S0278: 1, H0549: 1, | H0550: 1, H0250: 1, | H0156: 1, L0738: 1, | H0327: 1, H0544: 1, | L0471: 1, H0083: 1, |
|                     |                     | <b>.</b>            |   |                     |                     |                     |                     |                     |                     |                     |                     |                        | •         | Ser-26 to Ile-35.   |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |
|                     |                     | -                   |   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2785                |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | :                   |                     |
|                     |                     |                     |   |                     | •                   |                     | •                   |                     |                     |                     |                     |                        |           | 147 - 617           |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 610                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ;                   |                     |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1025359             |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |
|                     |                     |                     |   |                     |                     | -                   |                     |                     |                     |                     |                     |                        |           | HLIBM71             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| <u> </u>         |                                     |                     |          |                  |                  |                  |           |                  |           |                   |                  | <u>·</u> |                  |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          |                     |   |                       | $\neg$             |
|------------------|-------------------------------------|---------------------|----------|------------------|------------------|------------------|-----------|------------------|-----------|-------------------|------------------|----------|------------------|------------------|------------------|------------------|-----------|------------------|-----------|------------------|------------------|--------------------|--------------------|----------|---------------------|---|-----------------------|--------------------|
|                  |                                     |                     |          |                  |                  |                  |           |                  |           |                   |                  |          |                  |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          |                     |   |                       |                    |
|                  |                                     |                     |          |                  |                  |                  |           |                  |           |                   |                  |          |                  |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          |                     |   |                       |                    |
|                  |                                     |                     |          |                  |                  |                  |           |                  |           |                   |                  |          |                  |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          |                     |   |                       |                    |
|                  |                                     |                     |          |                  |                  |                  |           |                  |           |                   |                  |          |                  |                  | •                |                  |           |                  |           |                  |                  | •                  |                    |          |                     |   |                       |                    |
| 1,               | -, ⊢                                | , <del>,</del>      | 1,       | 1,               | <del>, ,</del>   | 1,               | H,        | 1,               | <u>,</u>  |                   | <b>–</b>         | <u>_</u> | 1,               | 1,               | Ţ,               | 7,               | 1,        | 1,               | 1,        | Ţ,               | ۲,               | 1,                 | 1 and              |          | : 1,                | Ę,                                      | 70: 1.                |                    |
| H0355: 1, H0416: | H0428: 1, L0483:<br>H0181: 1 H0617: | S0364:              | H0087:   | H0264: 1, H0100: | 10560:           | 0132:            | S0150:    | .0770            | , L0772:  | 0662:             | 0657:            | , L0541: | S0052: 1, H0547: | H0539: 1, S0406: | H0478: 1, H0727: | 0032:            | 1, L0740: | 0779:            | 1, L0757: | 0759:            | 0436:            | .0581: 1, L0595: 1 | H0665: 1, H0423: 1 |          | L0439: 2, H0687: 1, | 0805:                                   | L0438: 1 and H0670: 1 | ļ                  |
| 5: 1, H          | 8: 1, L<br>1. L<br>H                | 2: 1, 5:<br>2: 1, S | •        | 4: 1, H          | H0494: 1, H0560: | ,0065: 1, H0132: | 1: 1, S   | H0647: 1, L0770: | 9: 1, L   | .0764: 1, L.0662: | .0387: 1, L0657: |          | 2: 1, H          | 9: 1, S          | 8: 1, H          | H0732: 1, S0032: | 9:1,L     | .0747: 1, L0779: | 5: 1, L   | .0758: 1, L0759: | S0434: 1, S0436: | 1:1, L             | 5: 1, H            | 5: 1.    | 39: 2, ]            | l: 1, L                                 | 8: 1 an               | 1                  |
| H035             | H042                                | H0032: 1,           | H0063: 1 | H026             | H049             | 1006             | H0131: 1, | H08              | 1.0769: 1 | 1076              | 1038             | L0658: 1 | S005             | H053             | H047             | H073             | 1.0439: 1 | 7,707            | L0755: 1  | L075             | S043             | 1058               | H066               | S0446: 1 | 1,42                | ,1076                                   |                       |                    |
|                  |                                     |                     |          |                  |                  |                  |           |                  |           |                   |                  |          |                  |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          | 14,                 | sp-148                                  | p-163,                | s-211.             |
|                  |                                     |                     |          |                  |                  |                  |           |                  |           | ,                 |                  |          |                  |                  |                  |                  |           |                  |           |                  |                  |                    | •                  |          | o Trp-              | 5 to As                                 | to As                 | 5 to Hi            |
|                  |                                     |                     |          |                  |                  |                  |           |                  |           |                   |                  |          |                  |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          | Phe-9 to Trp-14,    | Arg-125 to Asp-148, L0761: 1, L0805: 1, | Ser-156 to Asp-163,   | Pro-206 to His-211 |
|                  |                                     |                     |          |                  |                  |                  |           |                  |           |                   |                  |          |                  |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          | 2786 I              |   | -                     |                    |
|                  |                                     |                     |          |                  |                  |                  |           |                  |           |                   |                  |          | -                |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          | 7                   | _                                       |                       | $\dashv$           |
|                  |                                     | •                   |          |                  |                  |                  |           |                  |           |                   |                  |          |                  |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          | 3 - 701             |   |                       |                    |
|                  |                                     |                     |          |                  |                  |                  |           |                  |           |                   |                  |          |                  |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          | 3                   |   |                       |                    |
|                  |                                     |                     |          | _                |                  |                  |           |                  |           | •                 |                  |          |                  |                  |                  |                  |           | _                |           |                  |                  |                    |                    |          | 611                 |   |                       |                    |
|                  |                                     |                     |          |                  |                  |                  |           |                  |           |                   |                  |          |                  |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          | 366                 |   | •                     |                    |
|                  |                                     |                     |          |                  |                  |                  |           |                  |           |                   |                  |          |                  |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          | 1025366             |   |                       |                    |
|                  |                                     |                     |          |                  |                  |                  |           |                  |           | _                 |                  |          | <del></del> ,    |                  |                  |                  |           |                  | _         |                  | _                |                    |                    |          | V27                 |   |                       |                    |
|                  | ٠                                   |                     |          |                  |                  |                  |           |                  |           |                   |                  |          |                  |                  |                  |                  |           | ×                |           |                  |                  |                    |                    | -        | HNOKW27             |   |                       |                    |
|                  |                                     | <u></u>             |          |                  |                  | •                |           |                  |           |                   |                  |          |                  |                  |                  |                  |           |                  |           |                  |                  |                    |                    |          | ഥ                   |   |                       |                    |

|   | ÷  |
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| 300008,<br>300008,<br>300008,<br>300007,<br>300071,<br>301000,<br>301830,<br>309470,<br>309500,<br>309850,<br>311050, |  |
| Xp11.23-<br>p11.22  |  |
| 2, AR039: 2, 2, AR053: 2, 2, AR060: 1, 1, AR061: 1, 1, 80136: 1, 1, S0136: 1, 1 and L0749: 1.                         | Ser-1 to Gly-18, AR089: 13, AR060: 5, Arg-45 to Gly-31, AR096: 5, AR104: 5, Arg-46 to Ser-52, AR061: 2, AR055: 1 Ala-103 to Ala-108, S0152: 12, S0356: 10, Ser-154 to Gly-165, H0551: 6, H0423: 6, Gln-228 to Pro-236, S0212: 5, H0090: 5, Ser-284 to Gly-291, H0667: 5, S0358: 4, Ala-321 to Asp-327, H0620: 4, H0622: 4, Lys-377 to Asn-394, H0591: 4, L0794: 4, Asp-406 to Ser-416. S0380: 4, L0731: 4, L0588: 4, S0347: 3, R0581: 3, S0126: 3, H0581: 3, S0126: 3, |
| AR089:  | 1, A 1, 108, 108, 108, 108, 108, 108, 108, 1   |
|   |  |
| 2787  | 2788   |
| 461 - 303   | 49 - 1296  |
| 612   | 613  |
| 1025526   | 1025712  |
| HPFDG48   | HVVBF24  |

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|                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | - | -                   |                     |  |
| H0436: 3, S0028: 3, | L0756: 3, H0445: 3, | S0192: 3, S0196: 3, | H0656: 2, S0116: 2, | S0442: 2, S0376: 2, | S0046: 2, H0549: 2, | H0098: 2, H0014: 2, | S0003: 2, H0560: 2, | H0641: 2, H0529: 2, | L0766: 2, H0520: 2, | H0519: 2, H0666: 2, | L0602: 2, H0478: 2, | L0740: 2, L0751: 2, | L0754: 2, S0434: 2, | L0595: 2, H0542: 2, | H0543: 2, H0624: 1, | H0170: 1, S0040: 1, | S0402: 1, S0134: 1, | H0341: 1, H0661: 1, | H0663: 1, H0449: 1, | H0638: 1, S0045: 1, | S0140: 1, L0717: 1, | H0411: 1, S0222: 1, | H0497: 1, H0486: 1, | T0040: 1, H0244: 1, |   | H0596: 1, H0566: 1, | L0163: 1, H0051: 1, | S0051: 1, T0079: 1,<br>H0375: 1, H0060: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | _                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |   |                     |                     | ·<br>:                                     |
|                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     | <del></del>         |                     | ,                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |   |                     |                     | ,  |
|                     |                     |                     |                     |                     | `                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |   |                     |                     |  |

|                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | _ |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                     | *                      |                      |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     | . <del>-</del>      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                     |                        |                      |
| S0250: 1, H0615: 1, | H0029: 1, H0553: 1, | H0644: 1, H0032: 1, | H0169: 1, H0316: 1, | H0038: 1, H0040: 1, | H0634: 1, H0063: 1, | T0067: 1, H0477: 1, | H0488: 1, H0623: 1, | H0494: 1, H0625: 1, | L0065: 1, S0438: 1, | H0509: 1, S0142: 1, | L0770: 1, L0646: 1, | L0662: 1, L0653: 1, |   | L0526: 1, L0666: 1, | S0374: 1, H0693: 1, | H0547: 1, H0682: 1, | H0435: 1, H0658: 1, | H0660: 1, H0648: 1, | H0672: 1, S0328: 1, | H0710: 1, H0518: 1, | H0579: 1, H0704: 1, | H0555: 1, S0390: 1, | S0037: 1, S0027: 1, | L0439: 1, L0747: 1, | L0752: 1, L0759: 1, | · 🚅 | L0362: 1, S0011: 1, | S0194: 1 and S0384: 1. | H0547: 10, H0013: 9, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                     |                        | Ala-8 to Arg-14,     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     | <u>.</u>            |                     |                     |                     |                     |                     | _                   |                     | -                   |                     |                     |     |                     |                        | 2789                 |
|                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |     | •                   | 1                      | 4207 -               |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                     |                        | 614                  |
|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |     |                     |                        | 1025745              |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   | ,                   | ,                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |     |                     |                        | HE8UF88              |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|-----------------------|---------------------|----------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     | ĺ                   |
|                     |                     |                     |                     |                     |                     | ,                   |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     | •                   |                     |                     |                     |                     | Ì                   |
|                     |                     |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     | _                   |                     |                     |                     |                     |                     |                     |
| İ                   |                     |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     |                      | ٠                   |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | •                   |                     |                     |                     |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     | ٠                   |                     |                     |                     | •                   | ļ                   |
| -                   | _                   |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     | _                   |                     | $\dashv$            |
| 6,                  | 5,                  | 4,                  | 4,                  | 4,                  | 4,                  | 4,                  | 3,                                      | 3,                    | ω,                  | ຕ໌                   | ъ,                  | 3,                  | ω,                   | . તં                | 4                   | ત્                  | ų                   | બં                  | ત્                  | ર્વ  | બં                  | ર્વ                 | 4                   | ત્                  | 4                   | 4                   | ų                   | 4                   | 2,                  |
| 771:                | 122:                | 341:                | 186:                | 038:                | 241:                | 52:                 | 171:                                    | <u>4</u>              | 024:                | 3.                   | 670:                | 539:                | 749:                 | 624:                | 583:                | 116:                | 54:                 | 318:                | 946:                | 303:   | 634:                | 561:                | 306:                | 4.                  | 519:                | 672:                | 378:                | 969                 | 41:                 |
| 10,                 | S04                 | HO                  | H07                 | HO,                 | , T0                | S01                 | H0                                      | S00                   | , HO                | S04                  | , HO                | H0;                 | 5                    | ŎH                  | HO                  | , SO                | S03                 | H0.                 | )HO                 | , SO   | , HO                | H,                  | ñ                   | H0                  | H0                  | ,H0                 | S03                 | H,                  | 3                   |
| 8                   | 7:6,                | 0:5,                | 6: 4,               | 1:4                 | 4:0                 | 6:4                 | 4.6                                     | 0:3,                  | 4:3                 | 2: 3,                | 9:3                 | 0:3,                | .0754: 3, L.0749: 3, | 9:3,                |                     | 7:2                 | 8:2,                | 5:2,                | 70110: 2, H0046: 2, | 6:2  | 1:2                 | 2:2                 | ,0768: 2, L0806: 2, | .0664: 2, H0144: 2, | .0565: 2, H0519: 2, | 9:2                 | 8: 2,               | 11: 2               | 5:2                 |
| L0758: 8, L0771: 6, | .0747: 6, S0422: 5, | L0770: 5, H0341: 4, | S0356: 4, H0486: 4, | H0251: 4, H0038: 4, | H0040: 4, T0041: 4, | L0766: 4, S0152: 4, | 043                                     | \$0360: 3, \$0046: 3, | H0574: 3, H0024: 3, | (10042: 3, S0440: 3, | H0529: 3, H0670: 3, | S0330: 3, H0539: 3, | 2775                 | .0779: 3, H0624: 2, | S0134: 2, H0583: 2, | H0657: 2, S0116: 2, | 50418: 2, S0354: 2, | S0045: 2, H0318: 2, | [011                | H0266: 2, S0003: 2,                          | 10591: 2, H0634: 2, | 10412: 2, H0561: 2, | 076                 | 990                 | 056                 | H0659: 2, H0672: 2, | S0328: 2, S0378: 2, | H0521: 2, H0696: 2, | H0345: 2, L0741: 2, |
| Ĭ                   |                     |                     | 45, 5               |                     |                     | 77,1                | Gly-378 to Leu-383, L0439: 4, H0171: 3, | 4,                    | 56. IF              | _                    | <u>, 144</u>        | <u>(0</u>           |                      | <u> </u>            | <u>(V</u>           |                     | <u>UJ</u>           | <u>( )</u>          |                     | <u> </u>                                     |                     | <u> </u>            |                     |                     | =                   | <u> </u>            | <u> </u>            | <u> </u>            | Н                   |
| 69                  | 5-10                | ln-1]               | lu-1                | ys-2                | ly-2                | er-3(               | en-3                                    | ğ                     | er-4                |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Ile-64 to Thr-69,   | Val-94 to Asp-101,  | His-112 to Gln-117, | Tyr-139 to Glu-145, | Fyr-195 to Cys-208, | Gly-216 to Gly-223, | Asp-297 to Ser-307, | toL                                     | Ile-391 to Pro-404,   | Asn-451 to Ser-466. |                      |                     |                     |                      | •                   |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     | :                   |                     |
| 4 to                | 24<br>₹             | 1121                | 139                 | 195                 | 216                 | 297                 | 378                                     | 91 ta                 | 451                 |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     | .                   |
| 9-9-                | Val-                | His-                | Iyr-                | lyr-                | Gly                 | Asp.                | Gly-                                    | le-3                  | Asn-                |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | <del>-</del> -      |                     | _                   | <u></u>             | Ť                   |                     | _                                       |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     | _                    |                     |                     |                     |                     |                     |                     |  | •                   |                     |                     |                     |                     |                     |                     |                     |                     |
| 2810                |                     |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| _                   | •                   |                     |                     |                     |                     |                     |   | _                     |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| T                   |                     | -                   |                     |                     |                     |                     |   |                       |                     | _                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |   |                       |                     | •                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |   |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <u> </u>            |                     |                     |                     |                     |                     |                     | <u> </u>                                |                       |                     |                      |                     |                     |                      |                     |                     |                     |                     |                     |                     | <u>.                                    </u> |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|---------------------|-------------|---------------------|--------------------|--------------------|--------------------|------------------|---------------------|------------------|--------------------|--------|--------------------|-----------|------------------|------------------|------------|------------------|-------------|----------|----------|-------------|--------------------|------------------|--------------------|-----------|-----------|-----------|-----------|--------------------|----------|
|                     |             |                     |                    |                    |                    | •                |                     |                  |                    |        |                    |           |                  |                  |            |                  |             |          |          |             | •                  |                  |                    |           |           |           |           |                    | 1        |
|                     |             |                     |                    |                    |                    |                  |                     |                  |                    |        |                    |           |                  |                  |            |                  |             |          |          |             |                    |                  |                    |           |           |           |           |                    |          |
|                     |             |                     |                    |                    |                    |                  |                     |                  |                    |        |                    |           |                  |                  |            |                  | •           |          |          |             |                    |                  |                    |           |           |           |           |                    |          |
| 1                   |             |                     |                    |                    |                    |                  |                     |                  |                    |        |                    |           |                  |                  |            |                  |             |          |          |             |                    |                  |                    |           |           | •         |           |                    |          |
|                     | _           |                     | <br>               | •                  |                    |                  | _                   | •                |                    |        | _                  | •         | _ •              |                  | •          |                  | _:          | •        |          |             |                    |                  |                    | _         |           | •         |           | •                  | _        |
| .0743: 2, L0748: 2, | L0759: 2,   | .0593: 2, L0595: 2, | 10667: 2, H0136: 2 | 556: 1             | 661:1              | 44:1             | 592: 1              | 497:1            | 492: 1             | 280: 1 | 474: 1             | H0546: 1  | 050: 1           | 373: 1           | , H0051: 1 | 687: 1           | 1, H0688: 1 | T0006: 1 | H0674: 1 | I, H0598: 1 | 268: 1             | 100:1            | 438: 1,            | 646: 1    | L0763: 1  | 646: 1    | L0521: 1  | 794: 1             | L0803: 1 |
| 2, L0               | 2, L0       | 2, 10               | 2, HC              | 2, H0              | 1, H0              | 1, S0            | 1, H0               | 1, HC            | 1, HC              | 1, 50  | 1, S0              | 1, HC     | 1, HC            | .0471: 1, H0373: | 1, H0      | 1, HC            | 1, HC       |          |          | 1, HC       | 1, HC              | 1, HC            | .0475: 1, S0438: 1 | 1, H0646: |           | 1,10      |           | .0662: 1, L0794: 1 | 1        |
| .0743:              | .0751: 2, 1 | .0593:              | 10667              | H0423: 2, H0556: 1 | 36024: 1, H0661: 1 | H0663: 1, S0444: | S0278: 1, H0592: 1, | H0587: 1, H0497: | H0333: 1, H0492:   | 10427  | H0575: 1, S0474: 1 | H0596: 1, | H0123: 1, H0050: | .0471            | L0163: 1   | H0083: 1, H0687: | H0328: 1    | H0622: 1 | H0169:   | H0708:      | H0616: 1, H0268: 1 | H0623: 1, H0100: | .0475              | S0150:    | .0369: 1, | .0638: 1, | .0773: 1, | 70662              | .0522:   |
| Ī                   |             |                     |                    |                    | <u> </u>           |                  |                     |                  | , <del>, , ,</del> |        |                    |           |                  |                  |            |                  |             |          | .—       |             |                    |                  |                    | <u> </u>  |           |           |           | :                  | _        |
|                     |             |                     |                    | •                  |                    |                  | -                   |                  |                    |        |                    |           |                  |                  |            |                  |             |          |          |             |                    |                  |                    |           |           |           |           |                    |          |
|                     |             |                     |                    |                    |                    |                  |                     |                  |                    |        |                    |           |                  |                  |            |                  |             |          |          | •           |                    |                  |                    |           |           |           | ,         |                    |          |
|                     |             |                     |                    |                    | -                  |                  | _                   |                  |                    |        |                    |           |                  |                  |            |                  |             |          |          |             |                    |                  |                    |           |           |           |           |                    |          |
|                     |             |                     |                    |                    |                    |                  |                     |                  |                    |        |                    |           |                  |                  |            |                  |             |          |          |             | _                  |                  |                    | •         |           |           |           |                    |          |
|                     |             |                     |                    |                    |                    |                  |                     |                  |                    |        |                    |           |                  |                  |            |                  |             |          | •        |             |                    |                  |                    |           |           |           |           | :                  |          |
|                     |             |                     |                    |                    |                    |                  |                     |                  |                    |        |                    |           |                  |                  |            |                  |             |          |          |             |                    |                  |                    |           |           |           |           |                    |          |
|                     |             |                     |                    |                    |                    |                  |                     |                  |                    |        | _                  |           |                  |                  |            |                  |             |          |          |             |                    |                  |                    |           |           |           |           |                    |          |
|                     |             |                     |                    |                    |                    |                  | _                   |                  |                    |        |                    |           |                  |                  |            |                  |             |          |          |             |                    |                  |                    |           |           |           |           |                    | _        |
|                     |             |                     |                    |                    |                    |                  |                     |                  |                    |        |                    |           |                  |                  |            |                  |             |          | -        |             |                    |                  |                    |           |           |           | ,         |                    |          |
|                     |             |                     |                    |                    |                    |                  |                     | _                |                    |        |                    | _         |                  | <del></del>      |            |                  |             |          |          |             | _                  |                  | <del> ·-</del>     |           |           |           |           |                    |          |
|                     | -           |                     |                    |                    |                    |                  |                     |                  |                    |        |                    |           |                  |                  |            |                  |             |          |          |             |                    |                  |                    |           |           |           |           |                    |          |
|                     |             |                     |                    |                    |                    |                  |                     |                  |                    |        |                    |           |                  |                  |            |                  |             |          | _        |             |                    |                  |                    |           |           |           |           |                    |          |

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|---|---|--|
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| L0774: 1, L0775: 1,<br>L0776: 1, L0655: 1,<br>L0659: 1, L0526: 1,<br>L0789: 1, L0666: 1,<br>H0520: 1, H0689: 1,<br>H0690: 1, H0683: 1,<br>H0660: 1, H0648: 1,<br>S0380: 1, S0406: 1,<br>H0478: 1, H0626: 1,<br>L077: 1, S0434: 1,<br>L0757: 1, S0434: 1,<br>L0757: 1, S0434: 1,<br>L0596: 1, L0592: 1,<br>S0026: 1, H0542: 1,<br>S0026: 1, H0542: 1,<br>S0424: 1, S0384: 1,<br>S0456: 1 and L0600: 1. | L0748: 2, L0745: 2,<br>S0040: 1, H0637: 1,<br>H0580: 1, H0553: 1 and<br>L0761: 1. | L0758: 9, S0412: 8,<br>L0749: 6, S0360: 5,<br>H0038: 5, L0662: 5,<br>L0751: 5, S0356: 3,<br>H0618: 3, S0051: 3,<br>H0616: 3, L0666: 3,<br>L0743: 3, L0439: 3,<br>L0731: 3, H0295: 2, |
|   | Leu-11 to Gly-22,<br>Ala-87 to Gly-96.  |  |
|   | 2790  | 2791   |
|   | 1558 -<br>1259  | 71 - 1606  |
| •   | 615   | 616  |
|   | 1025749   | 1025965  |
|   | HOUBC29   | HOCPY47  |

| Γ                   |                     |                      | _                    |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |
|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|-----------|----------|-----------|------------------|--------|
|                     |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |
|                     |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |
|                     | -                   |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | •                |                  |                  |                  |                  |           |           |          |           |                  |        |
|                     |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  | -                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |
|                     |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |
| 5: 2,               | 9. 2,               | 5: 2,                | 5: 2,                | 0; 2,               | 6: 2,               | 3: 2,               | 2: 2,               | 1: 1,            | 1: 1,            | 9: 1,            | 1: 1,            | 6: 1,            | 4: 1,            | l: 1,            | 0: 1,            | ); 1,            | I: 1,            | 0: 1,            | 0: 1,            | 1:1,             | I: 1,            | 0: 1,            | 9: 1,            | 2: 1,     | 4: 1,     | 8: 1,    | 7: 1,     | 5: 1,            | 3: 1,  |
| H013                | 1.076               | 1,001                | 1,066                | <b>S033</b> (       | H043                | L0588               | H035                | H038             | H034             | H033             | H041             | H058             | H057             | L002             | S001             | S0049            | 1.047            | T001             | H003             | H018             | H036             | H009             | H052             | , L0772:  | L0764:    | L0648:   | L0767:    | L037             | L0653: |
| H0587: 2, H0135: 2, | H0591: 2, L0769: 2, | .0774: 2, L.0775: 2, | .0659: 2, L.0665: 2, | H0672: 2, S0330: 2, | H0539; 2, H0436; 2, | .0754: 2, L0588: 2, | .0605: 2, H0352: 2, | T0002: 1, H0381: | 30116: 1, H0341: | H0638: 1, H0339: | .0717: 1, H0411: | HO441: 1, HO586: | H0333: 1, H0574: | S0280: 1, L0021: | H0253: 1, S0010: | 30346: 1, S0049: | H0085: 1, L0471: | H0024: 1, T0010: | H0239: 1, H0030: | H0031: 1, H0181: | H0032: 1, H0361: | H0598: 1, H0090: | H0100: 1, H0529: | .0637: 1, | .0646: 1, | 0771: 1, | .0521: 1, | .0766: 1, L0375: | 78: 1, |
| H058                | H059                | 1.07                 | 1065                 | H06                 | H05                 | 1075                | 100                 | 7007             | S011             | H06              | 101              | H04              | H03              | S028             | H02              | S034             | 00H              | H00              | H02              | H00              | H00              | H05              | H01(             | 1063      | 7007      | 1,07     | 1052      | <u> </u>         | L0378: |
|                     |                     |                      |                      | •                   |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |
|                     |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |
|                     |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |
| _                   | _                   |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  | _                |                  |                  |                  | -                |                  |                  |           |           |          |           |                  |        |
|                     |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | ٠                |                  |                  |           | •         |          |           |                  |        |
|                     |                     |                      |                      |                     |                     |                     | _                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | _         | ,         |          |           | :                |        |
|                     |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |
| r                   |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |
| _                   |                     |                      |                      |                     |                     |                     |                     |                  | _                | -                |                  |                  | <u> </u>         |                  |                  |                  | <u></u> .        |                  | _                |                  |                  |                  |                  |           |           |          |           |                  |        |
|                     | •                   | ٠                    |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  | ٠.               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           | -         |          |           |                  |        |
|                     |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |
| -                   |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | _                |                  |                  | •                |                  |           |           |          |           | ٠.               |        |
|                     |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |
|                     |                     |                      |                      |                     |                     |                     |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |          |           |                  |        |

|   |                       |                     |                     |                     |                     |                       |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     | <u> </u>            |  |
|---|-----------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|
|   | 601011,               | 601011,             | 601011,             | 601011,             | 601768,             | 601843                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
|   | 19p13                 |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
| L0657: 1, L0544: 1,<br>L0647: 1, H0435: 1,<br>H0659: 1, H0658: 1,<br>H0670: 1, H0660: 1,<br>H0521: 1, H0696: 1,<br>H0555: 1, H0478: 1,<br>S0037: 1, S0027: 1,<br>L0756: 1, L0777: 1,<br>L0756: 1, L0777: 1,<br>L0756: 1, L0777: 1,<br>L0756: 1, L0777: 1, | H0618: 12, H0253: 11, | L0777: 8, L0755: 8, | L0794: 6, L0659: 6, | L0758: 6, S0192: 5, | L0743: 4, S0418: 3, | L0764: 3, S3014: 3,   | .0744: 3, S0420: 2, | S0046: 2, S0132: 2, | H0333: 2, H0486: 2, | H0599: 2, T0023: 2, | _0774: 2, L0375: 2, | H0555: 2, L0754: 2, | .0749: 2, L0756: 2, | .0731: 2, H0265: 1, | H0295: 1, S0298: 1, | S0212: 1, H0255: 1, | H0661: 1, S0358: 1, | H0580: 1, H0645: 1,<br>H0549: 1, H0497: 1, |
|   | Gln-52 to Thr-58,     | Pro-105 to Asp-111, | Arg-175 to Cys-182, | Leu-221 to Val-227, | Thr-257 to Gly-264, | Ser-266 to Glu-271. I | _                   | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
|   | 2792                  |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
| ÷   | 3 - 824               |                     | -                   |                     |                     |                       |                     |                     |                     |                     | <u>.</u>            |                     | -                   |                     | -                   |                     |                     |  |
|   | 617                   |                     |                     | •••                 |                     |                       |                     |                     |                     |                     |                     |                     | •                   | -                   |                     |                     |                     |  |
|   | 1025990               |                     |                     |                     |                     |                       | -                   |                     | ,                   |                     |                     | •                   |                     |                     |                     |                     |                     |  |
|   | HOVKE20               |                     |                     | -                   |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |

| Γ-       |            |                  |           |                  |               |                  | <u> </u>     |             |            |           |  |              |                  | _                |            |                  |           |                     | _                   |                      |                     |                    |                    |                    |                    |                     |                    |                      | -                  |
|----------|------------|------------------|-----------|------------------|---------------|------------------|--------------|-------------|------------|-----------|--|--------------|------------------|------------------|------------|------------------|-----------|---------------------|---------------------|----------------------|---------------------|--------------------|--------------------|--------------------|--------------------|---------------------|--------------------|----------------------|--------------------|
|          |            |                  |           |                  |               |                  |              |             |            |           |  |              |                  |                  |            |                  |           |                     |                     |                      |                     |                    |                    |                    |                    |                     |                    |                      |                    |
|          |            |                  |           |                  |               |                  | ٠            |             |            |           |  |              |                  |                  |            |                  |           |                     |                     |                      |                     |                    |                    |                    |                    |                     |                    |                      |                    |
|          |            | •                |           |                  |               |                  |              |             |            |           |  |              |                  | •                |            |                  |           |                     |                     |                      |                     |                    |                    | -                  |                    |                     |                    |                      |                    |
|          |            |                  |           |                  |               |                  |              |             |            |           |  |              |                  |                  |            |                  | -         |                     |                     |                      |                     |                    |                    |                    |                    |                     |                    |                      |                    |
| <u></u>  |            |                  |           |                  | _             |                  |              |             |            |           |  |              |                  |                  |            |                  |           |                     | 5: 1.               | : 7,                 |                     |                    |                    |                    |                    |                     |                    | <u> </u>             |                    |
| T0040: 1 | , H0545: 1 | 086: 1           | ,H0023: 1 | 014: 1           | , H0028: 1    | 688: 1           | , H0031: 1   | I, H0059: 1 | , H0538: 1 | L0637: 1, | 772: 1,                                      | L0806: 1     | 809: 1           | 154: 1,          | )28: 1,    | 740:1            | L0752: 1  | 665: 1              | H050                | H0666: 13, H0620: 7, | .0731: 7, L0747: 6, | 740:5              | 757: 5             | 123:4              | 135:4              | .0666: 4, L0665: 4, | 748: 4,            | .0777: 4, L.0588: 4, | 358: 3,            |
| 1 TO     | 1, HO      | 1, H0            | 1, H0     | 1, H0            |               | 1, H0            | 1, H0        |             |            | •         | •  | _ ;          | 1,10             | 1, S04           | 1, S0028:  | .0741: 1, L0740: | 1,10      | 1, HO               | 1 and               | 5: 13,               | 7, L0               | .0659: 5, L0740: 5 | .0750: 5, L0757: 5 | 4, H0              | 4, H0              | 4, L0               | 4, LO              | 4, L0                | 3, S0              |
| H0492: 1 | H0505:     | H0150: 1, H0086: | H0123: 1  | H0024: 1, H0014: | H0051: 1      | H0615: 1, H0688: | H0424: 1     | 10617:      | 10494: 1   | .0769: 1  | .0667: 1                                     | .0804: 1     | .0526: 1, L0809: | S0330: 1, S0454: | 50027: 1   | .0741:           | .0747: 1, | .0757: 1, H0665: 1, | S0042: 1 and H0506: | 990H                 | .0731:              | .0659:             | .0270.             | 50360: 4, H0123: 4 | S0022: 4, H0135: 4 | .9990               | S0028: 4, L0748: 4 | :7770                | S0420: 3, S0358: 3 |
| ř        | بلار       |                  | <u> </u>  | <u> </u>         | <u>, 11, </u> | <u> </u>         | <u>, 14.</u> | <u> </u>    | بلبر       | <u> </u>  | <del></del>                                  | 1-1          | _=               | <u>(,</u>        | <u>(7)</u> | <del></del>      | <u> </u>  | <u> </u>            | O <sub>2</sub>      |                      | <u>. = -</u>        | <u> </u>           | <u>  </u>          | <u>(V)</u>         | <u> </u>           |                     | <u>(V)</u>         | _=_                  | <u>(U</u>          |
|          |            |                  |           |                  |               |                  |              |             |            |           |  |              |                  |                  |            |                  |           |                     |                     |                      |                     |                    |                    |                    |                    |                     |                    |                      |                    |
|          |            |                  |           |                  |               |                  |              |             |            |           |  |              |                  | ٠                |            |                  |           |                     |                     |                      |                     |                    |                    |                    |                    |                     |                    | ;                    |                    |
| -        | -          |                  |           |                  |               |                  |              |             |            |           | <u>.                                    </u> | _            |                  |                  |            |                  |           |                     |                     | 3                    |                     |                    |                    |                    |                    |                     | <u>:</u> _         |                      |                    |
|          |            |                  |           |                  |               |                  |              |             |            |           |  |              |                  |                  |            |                  |           |                     |                     | 2793                 |                     |                    |                    |                    |                    |                     |                    |                      |                    |
|          |            |                  |           |                  |               |                  |              |             |            |           |  |              |                  |                  |            |                  |           |                     |                     | 398 - 1024           |                     | ٠                  |                    |                    |                    | •                   |                    |                      |                    |
| L        |            |                  |           |                  |               |                  |              |             |            |           |  | <del>-</del> |                  |                  |            |                  |           |                     |                     | 398                  |                     |                    |                    |                    |                    |                     |                    |                      |                    |
|          |            |                  |           |                  |               |                  |              |             |            |           |  |              |                  |                  |            |                  |           |                     |                     | 618                  |                     |                    |                    |                    |                    |                     |                    |                      |                    |
|          |            |                  |           |                  |               |                  |              |             |            |           |  |              |                  |                  |            |                  |           |                     |                     | 39                   |                     |                    |                    |                    |                    |                     |                    |                      |                    |
|          |            |                  |           |                  |               |                  |              | -           |            |           |  |              |                  |                  |            |                  |           |                     |                     | 1026139              |                     |                    |                    |                    |                    |                     |                    |                      |                    |
| -        |            |                  |           |                  |               |                  |              |             |            |           |  |              |                  |                  |            |                  |           |                     |                     | 47                   |                     |                    |                    | _                  |                    | <u></u>             | _                  |                      |                    |
|          |            |                  |           |                  |               |                  |              |             |            |           |  |              |                  |                  |            |                  |           |                     |                     | HODGH47              |                     |                    |                    |                    |                    |                     |                    |                      |                    |
| L        |            |                  |           |                  |               |                  |              |             |            |           |  |              |                  |                  |            |                  |           |                     |                     | H                    |                     |                    |                    |                    |                    |                     |                    |                      |                    |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     | <u> </u>            |                     |  |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
| H0208: 3, H0545: 3, | H0046: 3, H0284: 3, | .0650: 3, L0375: 3, | ,0382: 3, H0352: 3, | H0592: 2, H0544: 2, | H0024: 2, H0266: 2, | H0286: 2, H0252: 2, | H0615: 2, H0428: 2, | H0628: 2, H0551: 2, | H0100: 2, S0210: 2, | .0763: 2, L0770: 2, | .0774: 2, L0661: 2, | .0518: 2, H0547: 2, | H0670: 2, S0037: 2,                          | .0751: 2, L0752: 2, | .0755: 2, L0758: 2, | .0601: 2, S0194: 2, | H0170: 1, H0265: 1, | H0686: 1, S0040: 1, | H0295: 1, H0341: 1, | H0638: 1, S0444: 1, | H0580: 1, H0329: 1, | S0468: 1, S0046: 1, | S0132: 1, S0476: 1, | H0619: 1, H0645: 1, | .0717: 1, S0278: 1, | H0550: 1, H0586: 1, | H0333: 1, L0021: 1, | H0575: 1, H0253: 1, | H0052: 1, H0150: 1, |
| OH                  | OH.                 | 07                  | 1.0.                | 0H                  | OH<br>HO            | OH HO               | OH                  | OH HO               | OH.                 | 10                  | DO.                 | )<br>TO             | OH .   | <u>ro</u>           | <u>Lo</u>           | 2                   | OH HO               | OH.                 | OH .                | OH OH               | <u>H</u>            | <u>20°</u>          | SO                  | OH OH               | <u>ì</u>            | OH OH               | <u>H</u>            | OH .                | )H                  |
|                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |  |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | _                   |                     |                     |                     | •                   |                     |                     | - :-                | <u>.                                    </u> |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | _                   |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |  |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|---------------------------------------|--|----------------|---|--|-------|--|--|----------------------------------|---|
|                                       |  |                |   |  |       |  |  |                                  |   |
|                                       | - <u> </u>   |                |   |  |       |  | · .  |                                  | ·   |
|                                       | H0634: 1, H0272: 1,<br>H0334: 1, H0633: 1,<br>H0646: 1, L0772: 1,<br>L0800: 1, L0643: 1, | ` <del>`</del> | L0805: 1, L0776: 1,<br>L0656: 1, L0783: 1,<br>L0809: 1, L0543: 1, | L0789: 1, L0663: 1,<br>H0682: 1, H0684: 1,<br>L0650: 1, L0660: 1 | ב ב ב | L0611: 1, S0027: 1,<br>L0439: 1, L0745: 1, | L0361: 1, L0603: 1,<br>H0668: 1, S0026: 1 and<br>H0667: 1. | H0328: 2, H0656: 1 and H0538: 1. | H0583: 2, L0744: 2,<br>L0747: 2, H0650: 1,<br>H0656: 1, S0356: 1, |
|                                       |  |                |   |  |       |  |  |                                  | Tyr-1 to Pro-8,<br>Asp-21 to Lys-28,<br>Arg-30 to Ile-38,         |
|                                       |  |                |   |  |       |  |  | 2794                             | 2795  |
|                                       |  |                |   |  |       |  |  | 87 - 497                         | 1889 -<br>2770  |
|                                       |  |                |   |  |       |  |  | 619                              | 620   |
|                                       |  |                |   |  |       |  | -  | 1026372                          | 1026805   |
|                                       |  |                |   |  |       |  |  | HODBK27                          | НЕ8СН59   |

| HO013: 1 HO500: 1   | H0581: 1, H0251: 1, |                     | H0615: 1, H0135: 1, | H0488: 1, H0538: 1, | L0521: 1, H0539: 1,                  | H0522: 1, S0028: 1,                    | L0366: 1 and H0677: 1. | AR052: 91, AR096: | 79, AR053: 69, AR039: | 64, AR089: 46, AR060: | 39, AR033: 35, AR104: | 32, AR055: 14, AR061: | 10 | L0805: 22, L0794: 15, | L0766: 12, L0747: 12, | L0803: 11, L0740: 11, | L0779: 11, L0776: 9, | L0769: 7, H0521: 7, | L0439: 7, L0731: 7, | L0605: 7, S0474: 6, | S0422: 6, L0752: 6, | L0665: 5, L0748: 5, | L0758: 5, H0618: 4, | S0010: 4, L0771: 4, | L0789: 4, S3014: 4, | H0341: 3, H0615: 3, | H0708: 3, L0763: 3, | L0804: 3, L0659: 3, | L0809: 3, S0052: 3, |
|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------------------------|--|------------------------|-------------------|-----------------------|-----------------------|-----------------------|-----------------------|----|-----------------------|-----------------------|-----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 1 A cm 71 to Cla 76 | Val-85 to Pro-101   | Ser-104 to Arg-111, | His-123 to Arg-128, | Glu-146 to Arg-152, | Val-155 to Asp-271, L0521: 1, H0539: | Leu-274 to Gly-279, H0522: 1, S0028: 1 | Ser-283 to Glu-290.    | Asn-53 to Arg-58, | Asp-79 to Tyr-89,     | Pro-98 to Pro-108,    | Lys-195 to Lys-200.   |                       |    |                       | •                     |                       | -                    |                     |                     |                     | •                   |                     |                     |                     |                     |                     | •                   |                     |                     |
|                     |                     |                     |                     |                     |                                      |  |                        | 2796              |                       |                       |                       | ·                     |    |                       |                       |                       |                      |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                                      |  |                        | 2-625             |                       |                       |                       |                       |    |                       |                       |                       |                      |                     |                     | _                   |                     |                     | **                  |                     |                     |                     |                     | :                   |                     |
|                     |                     |                     |                     |                     |                                      |  |                        | 621               |                       |                       |                       |                       |    |                       |                       |                       |                      |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                                      |  |                        | 1026911           |                       |                       |                       |                       |    |                       |                       |                       |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                                      |  |                        | HSKGR52           |                       |                       |                       |                       |    |                       |                       |                       |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  | ·                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | •                  |                 |
|--------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------|-----------|----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|-----------------|
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    | _               |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     | _                   |                     |                     |           |           |                      |                  |                  |                  | <u></u>          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | :                  |                 |
|                    | 59: 3,              | 2: 2                | 99: 2,             | 50: 2,              | 35: 2,              | 16: 2,              | 4.2,                | 2:2,                | 70:2,               | L0744: 2, | L0749: 2, | 6: 2,                | 24: 1,           | 1.6              | 85: 1,           | 12: 1,           | 8: 1,            | 78: 1,           | 13: 1,           | 31: 1,           | 52: 1,           | 40: 1,           | 71: 1,           | 75: 1,           | 52: 1,           | 6: 1,            | 73: 1,           | 53: 1,             | 51: 1.          |
| , H06              | , L07               | , S022              | , H05              | , H00               | , H01               | , H06               | , H014              | , L035              | , H06               | , L07     | ,107,     | 1001;                | , H06            | , T004           | ,1.07            | , S04            | , S04C           | , S02            | , H00            | , H05            | , H00.           | , LOQ            | 3,               | , H03            | H02,             | , T000           | , H06            | , H010             | . H05           |
| .0438: 3, H0658: 3 | H0436: 3, L0759: 3, | S0360: 2, S0222: 2, | H0574: 2, H0599: 2 | 10196: 2, H0050: 2, | 10266: 2, H0135: 2, | 10038: 2, H0616: 2, | .0770: 2, H0144: 2, | S0374: 2, L0352: 2, | 10682: 2, H0670: 2, | .0743: 2, | .0751: 2, | .0750: 2, L.0756: 2, | S0424: 2, H0624: | .0002: 1, T0049: | 40657: 1, L0785: | 10671: 1, S0442: | 30444: 1, S0408: | H0733: 1, S0278: | H0431: 1, H0013: | S0280: 1, H0581: | S0049: 1, H0052: | H0251: 1, L0040: | H0123: 1, L0471: | H0630: 1, H0375: | S0003: 1, H0252: | .0483: 1, T0006: | H0644: 1, H0673: | S0036: 1, H0163: 1 | H0040: 1, H0551 |
| <u>Š</u>           | <u>H</u>            | 20                  | Œ<br>E             | 丑                   | HO<br>HO            | <u>H</u>            | 2                   | <u>S</u> 0          | 유                   | 10        | 0         | 2                    | 200              | <u>E</u>         | Œ<br>E           | 유                | <u> </u>         | )H               | <u>H</u>         | <u>S</u> 02      | <u>8</u>         | H                | E<br>E           | H                | 20               | Ö                | H                | <u>80</u>          | HO              |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
| _                  |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  | <u> </u>         |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <del></del>        |                 |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  | *                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | _                |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                    |                     |                     |                    |                     |                     |                     |                     | <u>-</u>            |                     |           |           |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|
| H0412: 1, H0413: 1, | S0038: 1, H0509: 1, | H0131: 1, S0344: 1, | L0598: 1, L0369: 1, | L0638: 1, L0667: 1, | L0662: 1, L0363: 1, | L0768: 1, L0775: 1, | L0375: 1, L0806: 1, | L0653: 1, L0655: 1, | L0666: 1, S0126: 1, | H0689: 1, H0684: 1, | H0660: 1, H0672: 1, | S0380: 1, H0710: 1, | H0522: 1, S0146: 1, | S3012: 1, S0027: 1, | S0028: 1, L0745: 1, | L0780: 1, L0753: 1, | H0445: 1, L0362: 1, | L0361: 1, H0653: 1, | H0423: 1 and H0506: 1. | S0354: 2, H0615: 2, | L0591: 2, S0356: 1, | S0442: 1, S0360: 1, | S0222: 1, H0362: 1, | H0156: 1, H0036: 1, | H0012: 1, H0014: 1, | S0051: 1, T0010: 1, | H0529: 1, S0126: 1, | L0439: 1, L0755: 1 and | L0608: 1. |
|                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Pro-2 to Pro-8.     |                     |                     |                     |                     |                     |                     |                     |                        |           |
|                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2797                |                     |                     |                     |                     |                     |                     |                     |                        |           |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 3 - 218             |                     | ,                   |                     |                     |                     |                     |                     |                        |           |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 622                 |                     |                     |                     |                     |                     |                     |                     |                        |           |
|                     |                     |                     | ,                   |                     |                     | -                   |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                        | 1026913             |                     |                     |                     |                     |                     | -                   | •                   |                        |           |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HMUAQ05             |                     |                     |                     |                     |                     |                     |                     |                        |           |

|                        |                        | -                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |
|------------------------|------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                        |                        | -                    |                     |                     |                     |                     |                     | *4                  | . <del></del>       | ,                   |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     | _                   | •                   |                     |                     |                     |                     |                     |
| H0662: 1, S0046: 1,    | HU658: 1 and HU67U: 1. | L0803: 12, H0581: 8, | S0358: 6, H0046: 6, | H0428: 6, S0356: 5, | S0007: 5, H0031: 4, | L0665: 4, H0271: 3, | H0038: 3, L0794: 3, | L0804: 3, L0666: 3, | H0693: 3, S0406: 3, | L0756: 3, L0758: 3, | L0592: 3, S0116: 2, | S0444: 2, H0431: 2, | H0586: 2, H0486: 2, | L0471: 2, H0615: 2, | H0039: 2, S0036: 2, | H0616: 2, S0422: 2, | H0529: 2, L0770: 2, | L0521: 2, L0662: 2, | L0776: 2, L0787: 2, | L0438: 2, H0670: 2, | H0660: 2, S0328: 2, | S0330: 2, H0436: 2, | L0748: 2, L0755: 2, | L0485: 2, L0599: 2, | S0192: 2, H0423: 2, | H0624: 1, S0342: 1, | S0114: 1, H0650: 1, | H0657: 1, H0638: 1, | S0354: 1, S0360: 1, |
| 2798 Glu-13 to Gly-18. |                        |                      | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 2798                   |                        | 2799                 |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 536 - 447              |                        | 3 - 1565             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 623                    |                        | 624                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| 1026979                |                        | 1027007              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HCOMA45                |                        | HE2KI45              |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |

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|                    |                    |                    |                  |                  |                  |                  |      |                  |                  |          |             |                  |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  |                     |                    |
|                    |                    |                    |                  |                  |                  |                  |      |                  |                  |          |             |                  |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  |                     |                    |
|                    |                    |                    |                  |                  |                  |                  |      |                  |                  |          |             |                  |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  | •                   |                    |
|                    |                    |                    |                  |                  |                  |                  |      |                  |                  |          |             |                  |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  |                     |                    |
|                    |                    |                    |                  |                  |                  |                  |      |                  |                  |          |             |                  |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  |                     |                    |
|                    |                    |                    |                  |                  |                  |                  |      |                  |                  | `        |             |                  |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  |                     |                    |
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| 1,                 | : 1,               | Ť                  | <b>?</b> : 1,    | . <u>.</u>       | : 1,             | <u>-</u> :       |      | . 1,             | : 1,             | .: 1,    | : I,        | <br>T:           | T,        | Τ,               | Ť                | : 1, |             | <u>.</u> ; | : 1,             | Ξ,                 | <del>-</del> : | . 1,             | Ι,                 | . T              | . 1,             | : 1,             | 3: T             | ÷.                  | <u>.</u> ;         |
| S0408: 1, S0410: 1 | H0329: 1, S0045: 1 | S0046: 1, S0278: 1 | H0441: 1, H0497: | H0331: 1, T0109: | S0280: 1, H0705: | H0318: 1, S0474: | 565  | H0572: 1, H0050: | H0687: 1, S0003: | 7488     | 1, T0041: 1 | 10494: 1, S0438: | 1, S0144: | 10517: 1, L0763: | .0772: 1, L0372: | 764  | L0649:      | 1, L0523:  | .0805: 1, L0655: | L0807: 1, L0527: 1 | 809            | .0663: 1, L0664: | S0428: 1, S0053: 1 | H0144: 1, S0374: | H0520: 1, H0519: | S0126: 1, H0682: | H0435: 1, H0648: | H0672: 1, S0378: 1, | H0521: 1, S0044: 1 |
| , S0               | , S0               | SO,                | H,               | , TC             | HO,              | , S0             | HC,  | Ħ,               | . S0             | H,       | TC          | , S0             | , SO      | I,               | 것                | 3,   | 것           | J.         | J,               | J,                 | J,             | J.               | so,                | , SC             | H,               | , H0             | H,               | SS.                 | ., SC              |
| 8: 1               | 93.                | 6: 1               | H: 1             | 11: 1            | 0:1              | 8: 1             | 0:1  | 72: 1            | 37:1             | 53: 1    | [2: 1       | 4                | 9.1       | 7:1              | 2: 1             | 0:1  | .0364: 1, I | 4: 1       | 5: 1             | 77: 1              | 9: 1           | 3: 1             | 8: 1               | 4.               |                  | 6: 1             | 35: 1            | 72: 1               | 21: 1              |
| 940                | 1037               | Š                  | ¥6               | 1033             | 3028             | 103              | 7011 | 1057             | <b>390</b> F     | H0553: 1 | H0412: 1    | 1045             | 30440:    | 105              | 170              | 80   | 93          | .0774: 1   | 8                | 8                  | 9              | 90               | 3042               | 101              | 105              | 3012             | 104              | .90I                | 105                |
| (0)                | <u> </u>           | <u>(0</u>          | ببد              | <u> </u>         | <u>(V)</u>       |                  | _    | <u>щ</u>         |                  |          |             |                  | <u>(0</u> |                  |                  |      | <u> </u>    | _          | =                | <u> </u>           |                | <u> </u>         | <u> </u>           | يحر              | <u> </u>         | <u>, v</u>       | <u> </u>         | _بنر                | <u> </u>           |
|                    |                    |                    |                  |                  |                  |                  |      |                  |                  |          |             |                  |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  |                     |                    |
|                    |                    |                    |                  |                  |                  |                  |      | •                |                  |          |             |                  | •         |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  | •                   |                    |
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|                    |                    |                    |                  |                  |                  |                  |      |                  |                  |          |             | _                |           | _                |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  | ,                   |                    |
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|                    |                    |                    | •                |                  |                  |                  |      | •                |                  |          |             |                  |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  |                     |                    |
|                    |                    |                    |                  |                  |                  |                  |      |                  |                  |          |             |                  |           |                  |                  |      |             |            |                  |                    |                | <u> </u>         |                    |                  |                  |                  |                  |                     |                    |
|                    |                    |                    |                  |                  |                  |                  |      |                  |                  |          |             | ٠.               |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  |                     |                    |
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|                    |                    |                    |                  |                  |                  |                  |      |                  |                  |          | -           |                  |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  |                     |                    |
|                    |                    |                    | •                |                  |                  |                  |      |                  |                  |          |             |                  |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  |                     |                    |
|                    |                    |                    |                  |                  |                  |                  |      |                  |                  |          |             |                  |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  |                     |                    |
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|                    |                    |                    |                  |                  |                  |                  |      |                  |                  |          |             |                  |           |                  |                  |      |             |            |                  |                    |                |                  |                    |                  |                  |                  |                  |                     |                    |
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|   | 178640,<br>216900   |   | 118504,<br>118504,                            |
|   | 2p11.2  |   | 20q12-q13.21118504,<br>118504,                |
| H0478: 1, H0627: 1,<br>H0631: 1, S0027: 1,<br>L0740: 1, L0747: 1,<br>L0752: 1, H0445: 1,<br>S0436: 1, L0591: 1,<br>S0196: 1, H0543: 1,<br>S0424: 1, S0462: 1,<br>S0446: 1 and H0506: 1. | H0667: 3, S0222: 2,<br>H0013: 2, L0438: 2,<br>H0265: 1, H0583: 1,<br>S0280: 1, H0036: 1,<br>H0318: 1, L0471: 1,<br>H0266: 1, H0328: 1,<br>H0553: 1, S0364: 1,<br>H0038: 1, H0040: 1,<br>H0488: 1, L0796: 1,<br>H0144: 1, H0684: 1 and |   | H0690: 1, H0683: 1,<br>H0666: 1 and S0328: 1. |
|   |   | Pro-1 to Leu-8, Arg-41 to Gly-48, Ile-73 to Cys-80, Ala-137 to Tyr-144, Lys-193 to Ala-208, Leu-254 to Leu-259, Ala-317 to Ala-323, Glu-343 to Phe-349. | Leu-46 to Thr-53,<br>Pro-80 to Ser-86,        |
|   | 2800  | 2801  | 2802  |
|   | 2 - 136   | 711 - 1117  | . 1 - 393                                     |
|   | 625   | 979   | 627   |
|   | 1027207   | 1027269   | 1027484                                       |
|   | НОДДОН  | HVVAT45   | HVCAG18                                       |

| 131242,             | 139320,             | 139320, | 139320, | 139320, | 600281, | 600281, | 602025 |                       |                      |  |                                      |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|---------------------|---------------------|---------|---------|---------|---------|---------|--------|-----------------------|----------------------|--|--------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     | ·       |         |         |         |         |        |                       |                      |  |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |         |         |         |         |         |        | L0751: 29, H0549: 17, | H0550: 17, L0666: 9, | L0747: 8, H0689: 7,                    | H0690: 7, H0682: 7,                  | H0615: 6, H0670: 6, | H0328: 5, H0150: 4, | H0660: 4, S0330: 4, | S0044: 4, L0362: 4, | H0597: 3, H0688: 3, | L0764: 3, L0657: 3, | L0809: 3, L0753: 3, | L0758: 3, L0759: 3, | H0431: 2, H0046: 2, | T0067: 2, H0059: 2, | H0647: 2, L0774: 2, | L0805: 2, L0783: 2, | L0438: 2, H0593: 2, | H0648: 2, H0672: 2, | S0328: 2, S0404: 2, | L0744: 2, L0779: 2, | S0436: 2, H0662: 1, | S0442: 1, S0444: 1, |
| Arg-101 to Gly-112, | Lys-115 to Gly-122. |         |         | ٠       |         |         |        | Leu-52 to Thr-59,     | Pro-86 to Ser-92,    | Arg-107 to Gly-118, L0747: 8, H0689: 7 | Lys-121 to Gly-128. H0690: 7, H0682: | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |         |         |         |         | •       |        | 2803                  |                      |  |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|                     |                     |         | ,       |         |         |         |        | 52 - 462              |                      |  |                                      |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |         |         |         |         |         |        | 628                   |                      |  |                                      |                     |                     |                     |                     | -                   | -                   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| -                   |                     |         |         |         |         |         |        | 1027486               |                      |  |                                      | •                   |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|                     |                     |         |         |         |         |         |        | HPTXK72               |                      |  |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|  | 253200,<br>600887 |  |
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|  | 5q11.1            |  |
| S0408: 1, S0007: 1,<br>H0461: 1, H0085: 1,<br>H0009: 1, S0024: 1,<br>H0188: 1, H0039: 1,<br>H0169: 1, H0674: 1,<br>L0520: 1, L5569: 1,<br>L0775: 1, L0658: 1,<br>L0634: 1, L0542: 1,<br>L0634: 1, L0658: 1,<br>H0684: 1, H0659: 1,<br>H0684: 1, H0659: 1,<br>S0406: 1, H0555: 1 and<br>L0780: 1. | <u>∞</u>          | AR053: 5, AR089: 5, AR096: 4, AR039: 4, AR060: 3, AR104: 2, AR055: 2, AR033: 2, AR061: 1  LO731: 15, LO754: 14, 10616: 9, LO766: 8, LO777: 7, 10266: 5, LO752: 5, 10358: 4, S0422: 4, 20518: 4, H0547: 4, 20518: 4, H0547: 4, 20518: 4, H0013: 3, 20406: 4, H0013: 3, 201206: 2, 2013: 3, 2013: 4, 20518 |
| S0408: 1, S0007: 1<br>H0461: 1, H0085:<br>H0009: 1, S0024: 1<br>H0188: 1, H0424:<br>H0169: 1, H0674:<br>L0520: 1, L5569: 1<br>L0775: 1, L0658: 1<br>L0634: 1, L0542: 1<br>L0634: 1, L0542: 1<br>L0663: 1, L0665: 1<br>H0684: 1, H0659: H0684: 1, H0659: H0658: 1<br>S0406: 1, H0555: L0780: 1    | H0306: 1          | AR053: 5, AR089: AR096: 4, AR039: AR060: 3, AR104: AR055: 2, AR033: AR061: 1 L0731: 15, L0754: H0616: 9, L0766: 8, L0758: 8, L0777: 7, H0266: 5, L0752: 5, S0358: 4, S0422: 4, L0518: 4, H0547: 4, S0406: 4, H0013: 3,   |
|  |                   |  |
|  |                   |  |
|  | 2804              | 2805   |
|  | 150 - 404         | 3 - 1013   |
|  | 629               | 630  |
|  | 1028405           | 1029191  |
|  | HHSGW78           | HDTLR06  |

|                    |                     |                     |                     |                    |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                  |                  |                  |                  |                  |                  |                  |                  |                     | $\neg$           |
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| 3,                 | · ~ *               | ~ <b>`</b>          | ς,                  |                    | حز<br>ر             | ų                   | ~໌ເ                 | ų                   | ર્ય                | ų                   | ٠,                  | ر<br>د              | ٠,                  | 2,                  | 7,                  | ~î                  | ດໂ                  | 1,               | Ţ.                  |                  | •                |                  | 1,               | 1,               | ·                |                  | 1,               | ,<br>,              | 1,               |
| 545:               | 303: 3              | 776: 3              | 439: 3              | 134:3              | 171: 3              | 486:                | 471: 2              | 553:                | 038:               | 551:                | 764: 2              | 555: 2              | 374: 2              | 672:                | 518:                | 756: 2              | 503: 2              | .989             | 583:                | 212:             | 120:1            | 42: 1            | 411:             | 587:             | 039:             | 280:             | 036:             | 105:                | 570:             |
| 3, HO              | 3, SO               | 3, 1.0              | 3, LQ               | 3, SQ              | 3, HO               | 2, HO               | 2, 1.0              | 2, H0               | 2, H0              | 2, H0               | 2, LO7              | 2, 100              | 2, S03              | 2, H0               | 2, H0               | 2,10                | , LO                | 1, H0            | I, HO               | 1, S0            | 1, S04           | 1, 304           | l, HO            | 1, H0            | 1, TO            | 1, SO            | 1, H0            | 1,10                | l, H0            |
| H0581: 3, H0545: 3 | H0083: 3, S0003: 3, | .0662: 3, L0776: 3, | 10659: 3, L0439: 3, | 0753: 3, S0434: 3, | .0465: 3, H0171: 2, | 10580: 2, H0486: 2, | H0318: 2, L0471: 2, | 10428: 2, H0553: 2, | H0032: 2, H0038: 2 | H0634: 2, H0551: 2, | S0438: 2, L0764: 2, | .0804: 2, L0655: 2, | J0664: 2, S0374: 2, | H0684: 2, H0672: 2, | H0651: 2, H0518: 2, | .0740: 2, L0756: 2, | .0362: 2, L0603: 2, | H0170: 1, H0686: | 30040: 1, H0583: 1, | H0657: 1, S0212: | S0282: 1, S0420: | S0356: 1, S0442: | .0717: 1, H0411: | H0600: 1, H0587: | H0257: 1, T0039: | H0069: 1, S0280: | H0575: 1, H0036: | H0590: 1, L0105: 1, | S0049: 1, H0570: |
| E                  | <u>H</u>            | <u>Š</u>            | Ř                   | 2                  | <u>Š</u>            | H                   | 贸                   | E C                 | <u>H</u>           | 皇                   | <u>20</u>           | <u> </u>            | <u>Š</u>            | <u>E</u>            | 兒                   | 3                   | ä                   | 9                | 20                  | <u>H</u>         | <u>S</u> 07      | 803              | <u>2</u>         | 丑                | H<br>H           | 9                | HO               | HOH                 | 200              |
|                    |                     |                     |                     |                    |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                  |                  |                  |                  |                  |                  |                  |                  |                     |                  |
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| L-                 |                     |                     | _                   |                    |                     |                     |                     |                     |                    |                     | -                   |                     |                     |                     |                     |                     |                     |                  |                     |                  |                  | -                |                  |                  |                  |                  |                  |                     |                  |
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| -                  |                     |                     |                     |                    |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                  |                  |                  |                  |                  |                  |                  |                  |                     |                  |
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|                    |                     |                     |                     |                    |                     |                     |                     |                     |                    | •                   |                     |                     |                     |                     |                     |                     |                     |                  |                     |                  |                  | -                |                  |                  | _                |                  |                  | _                   |                  |
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|                    |                     |                     |                     |                    |                     |                     | •                   |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                  |                  |                  |                  |                  |                  |                  |                  |                     |                  |
| L                  |                     |                     |                     |                    |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                  |                  |                  |                  |                  |                  |                  |                  |                     |                  |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|
|                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       |
| H0050: 1, H0014: 1, | H0510: 1, H0328: 1, | H0688: 1, H0031: 1, | H0644: 1, H0040: 1, | H0063: 1, H0488: 1, | .0475: 1, S0440: 1, | H0641: 1, H0649: 1, | H0652: 1, H0529: 1, | .0369: 1, L0762: 1, | J0763: 1, L0767: 1, | .0649: 1, L0803: 1, | .0650: 1, L0806: 1, | J0805: 1, L0607: 1, | .0657: 1, L0783: 1, | .0809: 1, L0530: 1, | .0793: 1, L.0666: 1, | .0665: 1, S0148: 1, | S0126: 1, H0683: 1, | H0658: 1, H0670: 1, | H0660: 1, S0380: 1, | S0152: 1, S0454: 1, | H0521: 1, H0696: 1, | S0188: 1, S0392: 1, | H0626: 1, S0390: 1, | .0759: 1, H0444: 1, | S0308: 1, S0026: 1, | H0667: 1, S0194: 1, | H0542: 1, H0543: 1, | S0412: 1 and H0506: 1 |
|                     |                     | <u>i i i i i</u>    | <u> </u>            | <u>.</u>            |                     | <u>نطن</u>          | ;                   |                     |                     | <u></u>             | . <del></del>       |                     |                     | <u> </u>            |                      |                     | S                   | <u> </u>            |                     | <u>8</u> 2          | <u>144</u>          | <u>.</u>            | <u>+</u>            | I                   | <u>.</u>            |                     | <u>1</u>            | S                     |
|                     |                     |                     |                     |                     |                     |                     | <u></u>             |                     |                     |                     |                     |                     |                     |                     | _                    |                     |                     |                     |                     |                     | _                   |                     | _                   |                     |                     |                     | •                   |                       |
|                     |                     |                     |                     | •                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     | -                   |                       |
|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                       |
|                     |                     |                     |                     |                     |                     |                     | <del></del>         | ,                   |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     | -                   |                     |                     | -                   |                     |                     |                     |                       |

| ř  |  |   |
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| H0413: 2, H0556: 1,<br>H0638: 1, S0376: 1,<br>H0457: 1, H0009: 1,<br>H0519: 1, H0682: 1,<br>H0672: 1, L0748: 1,<br>L0759: 1 and H0445: 1.                            | L0665: 3, L0777: 3,<br>L0717: 2, L0776: 2,<br>L0752: 2, S0116: 1,<br>H0661: 1, H0339: 1,<br>H0549: 1, H0587: 1,<br>H0688: 1, H0553: 1,<br>L0437: 1, L0769: 1,<br>L0637: 1, L0779: 1,<br>L0787: 1, L0794: 1,<br>L0766: 1, L0794: 1,<br>L0766: 1, L0794: 1,<br>L0766: 1, L0798: 1,<br>L0766: 1, L0798: 1,<br>L0764: 1, L0789: 1,<br>L0764: 1, L0789: 1,<br>L0764: 1, L0789: 1,<br>L0764: 1, L0779: 1,<br>L0754: 1, L0779: 1,<br>L0731: 1, L0758: 1,<br>S0260: 1, L0480: 1,       | L0770: 4, L0439: 4,<br>L0438: 3, H0670: 3,<br>L0748: 3, L0740: 3,<br>H0538: 2, L0777: 2,<br>S0342: 1, S0110: 1, |
| Pro-32 to Lys-38, H0413: 2, H0556: Ser-201 to Pro-211, H0638: 1, S0376: 1 Glu-217 to Glu-222. H0457: 1, H0009: H0519: 1, H0682: H0672: 1, L0748: 1 L0759: 1 and H044 | Gln-8 to Arg-27, L0665: 3, L0777; Val-34 to Asn-39, L0717: 2, L0776: Tyr-65 to Gly-75, L0438: 2, L0756: Glu-80 to Lys-87, L0752: 2, S0116: Thr-207 to Gly-218, H0661: 1, H0339: Thr-245 to Gln-250, H0549: 1, H0587: Leu-275 to Thr-263, H0688: 1, H0553: Leu-273 to Thr-281, L0351: 1, S0422: Lys-289 to Leu-296, L0437: 1, L0769: Ser-323 to Asn-330. L0637: 1, L0794: L0766: 1, L0789: L0787: 1, L0789: L0787: 1, L0779: L0731: 1, L0758: S0260: 1, L0758: L0731: 1, L0758: | Asp-1 to Gly-6,<br>Pro-14 to Trp-35,<br>Arg-37 to Gly-45,<br>Ser-63 to Pro-72,<br>Pro-87 to Arg-100,            |
| 2806   | 2807   | 2808  |
| 1328 - 663   | 1758 - 622   | 1032 - 571  |
| 631  | 632  | 633   |
| 1029484  | 1030870  | 1030871   |
| HPAMG11  | HSDJR27  | HOCPL33   |

|  |                     |   |                     |                     |                     |          | -                   | ,                   |                     | •                   |                     |                     | •                   |                     |  |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     | :                   |                     |
|--|---------------------|---|---------------------|---------------------|---------------------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |                     |   |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     | ······································ |                     |                     | _                   |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |
| S0354: 1, S0444: 1,<br>S0360: 1 H0729: 1                   | H0728: 1, H0734: 1, |   | H0550: 1, H0587: 1, | H0427: 1, H0253: 1, | H0023: 1, T0010: 1, | •        | H0135: 1, H0488: 1, | H0494: 1, S0015: 1, | H0647: 1, S0210: 1, | .0763: 1, L0800: 1, | .0644: 1, L0521: 1, | .0768: 1, L0775: 1, | .0805: 1, L0659: 1, | .0782: 1, L0783: 1, | .0528: 1, L0789: 1,                    | .0791: 1, L0793: 1, | .0532: 1, H0725: 1, | H0659: 1, H0658: 1, | H0660: 1, S0013: 1, | S0037: 1, S0206: 1, | .0751: 1, L0605: 1, | .0485: 1, L0599: 1 and | S0026: 1. | L0803: 4, L0777: 4, | .0758: 4, L0804: 3, | L0659: 3, L0752: 3, | S0408: 2, L0717: 2, | .0598: 2, L0770: 2, |
| Pro-102 to Gly-107. S0354: 1, S0444: 1<br>S0360: 1, H0729: | · 田<br>·            |   | ΞΞ.                 | <u> </u>            | <u>.</u>            | <u> </u> | <u>E</u> .          | <u> </u>            |                     | <u></u>             | <del>_</del>        | <u> </u>            |                     | <u> </u>            |  |                     |                     | <u> </u>            |                     | <u>.</u>            |                     | <u>-</u>               | S         |                     |                     |                     | S                   |                     |
|  |                     |   |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                        |           | 2809                |                     |                     |                     |                     |
|  |                     | , |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                        |           | 86-2158             |                     |                     |                     |                     |
|  | ·                   |   |                     | _                   |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     | •                   |                     | •                   |                     |                        |           | 634                 |                     |                     |                     |                     |
|  |                     |   |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     | š                   |  |                     |                     |                     |                     |                     |                     |                        |           | 1030963             | ,                   |                     |                     |                     |
|  |                     |   | ·                   |                     |                     |          |                     |                     |                     |                     |                     |                     |                     | •                   |  |                     |                     |                     |                     |                     |                     | ,                      |           | HPCQN80             | ,                   |                     |                     |                     |

|                     |                     |                     |                     |                     |                     | -                   |                     |                     | · -                 |                     |                     |                     |                     |                     |                     | -                   |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | •                   |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |
| L0662: 2, L0661: 2, | L0657: 2, L0526: 2, | L0664: 2, H0659: 2, | H0648: 2, L0748: 2, | L0751: 2, L0749: 2, | L0779: 2, S0040: 1, | H0713: 1, S0356: 1, | S0442: 1, S0360: 1, | H0393: 1, H0351: 1, | H0441: 1, H0486: 1, | H0581: 1, H0123: 1, | H0050: 1, S0051: 1, | H0673: 1, S0438: 1, | S0144: 1, L0520: 1, | L0763: 1, L0371: 1, | L0637: 1, L5566: 1, | L0800: 1, L0764: 1, | L0773: 1, L0649: 1, | L0381: 1, L0774: 1, | L0375: 1, L0806: 1, | L0653: 1, L0776: 1, | L0809: 1, L0530: 1, | L0788: 1, L0666: 1, | H0521: 1, H0555: 1, | S0032: 1, L0740: 1, | L0745: 1, L0750: 1, | L0756: 1, L0757: 1, | L0591: 1, L0581: 1 and | H0506: 1. | L0766: 6, L0804: 5, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |
|                     |                     |                     |                     |                     | •                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>            | . !       | 2810                |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                        |           | 1561 -              |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 635                 |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                        |           | 1031076             |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                        |           | HODEJ22             |

|  |                  | 107730,<br>107730,<br>107730,<br>107730,<br>182601,<br>602134  |
|--|------------------|--|
|  |                  | 2p24   |
| L0748: 5, L0666: 4,<br>L0663: 4, L0634: 3,<br>L0740: 3, H0445: 3,<br>H0318: 2, H0046: 2,<br>H0615: 2, H0428: 2,<br>L0761: 2, L0775: 2,<br>L0665: 2, H0658: 2,<br>H0583: 1, H0656: 1,<br>S0001: 1, H0637: 1,<br>H0090: 1, L0520: 1,<br>L0638: 1, L0649: 1,<br>L0527: 1, L0647: 1,<br>L0559: 1, L0647: 1,<br>L0664: 1, S0052: 1, | i g              | 3 <b>.</b>   |
|  | Phe-3 to Ala-23. | Cys-1 to Arg-6, L0439: 9, H0519: 6 Thr-84 to Thr-97, L0665: 5, H0547: 5, Arg-131 to Trp-136, L0755: 5, S0434: 5, Ser-155 to Gly-160, H0529: 4, L0659: 4, Thr-187 to Glu-201. S0358: 3, S0010: 3, L0731: 3, L0599: 3, L0595: 3, H0422: 3, H0657: 2, H0581: 2, |
| ·  | 2811             | 2812   |
| 1307   | 340 - 498        | 1 - 2271   |
|  | 636              |  |
|  | 1031085          | 1031316  |
|  | HODFZ16          | HWGAE28  |

|                     | <u> </u>            |                     |                     | _                   |                     | _        |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0251: 2, L0471: 2, | H0510: 2, H0031: 2, | .0763: 2, L0646: 2, | .0662: 2, L0775: 2, | .0809: 2, L0647: 2, | 10436: 2, L0754: 2, |          | .0605: 2, S0424: 2, | H0624: 1, L0615: 1, | H0341: 1, H0662: 1, | 30418: 1, L0005: 1, | 30360: 1, S0410: 1, | 30046: 1, H0415: 1, | H0600: 1, H0587: 1, | H0642: 1, H0486: 1, | H0250: 1, H0156: 1, | H0546: 1, H0041: 1, | S6028: 1, H0266: 1, | S0334: 1, S0250: 1, | F0006: 1, L0455: 1, | H0708: 1, H0551: 1, | H0059: 1, H0100: 1, | L0370: 1, H0429: 1, | 10494: 1, S0352: 1, | S0370: 1, S0150: 1, | H0641: 1, L0369: 1, | .0520: 1, L0770: 1, | .0638: 1, L0772: 1, | .0641: 1, L0521: 1, | .0794: 1, L0803: 1, |
| 1                   | <u> </u>            | <u> </u>            |                     |                     | <u> </u>            | <u> </u> |                     | <u>, +4</u>         | <u>, 11</u>         | S                   | <u> </u>            | <u>S</u>            | <u> </u>            | <u></u>             | <u> </u>            | <del>=</del>        | <u>.</u>            | <u>S</u>            | <u>r</u>            | <u> </u>            |                     |                     |                     | <u> </u>            | <u>-</u>            |                     | <del> 1</del>       |                     | I                   |
|                     |                     | _                   |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |          |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     | , -                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|   | 230400,<br>250250 | 230400,<br>250250  |
|---|-------------------|--|
|   | 9p13-p12 2        | 9p13-p12 2   |
| L0804: 1, L0650: 1,<br>L0654: 1, L0661: 1,<br>L0656: 1, L0526: 1,<br>L0790: 1, L0666: 1,<br>L0565: 1, H0520: 1,<br>H0690: 1, H0435: 1,<br>H0659: 1, H0670: 1,<br>H0660: 1, H0696: 1,<br>H0704: 1, S0406: 1,<br>L0779: 1, L0777: 1,<br>L0779: 1, L0777: 1,<br>L0780: 1, L0362: 1,<br>L0608: 1, L0362: 1,<br>H0665: 1, S0194: 1,<br>H0665: 1, S0194: 1, | H0415: 2          | L0747: 8, L0659: 7,<br>L0776: 5, L0770: 4,<br>L0662: 4, L0768: 4,<br>L0775: 4, L0752: 4,<br>L0603: 4, H0556: 3,<br>S0410: 3, L0665: 3,<br>L0439: 3, L0750: 3,<br>S0356: 2, S0408: 2,<br>L0471: 2, H0271: 2,<br>S0440: 2, L0762: 2,<br>L0769: 2, L0372: 2,  |
|   | Arg-1 to Gly-6.   | Ala-4 to Glu-13, Ala-21 to Asp-27, Lys-34 to Asn-40, Asp-91 to Ile-98, Pro-122 to Lys-128, Arg-160 to Gly-165, S0410: 3, L0655: 3, Glu-203 to Ser-213, L0439: 3, L0750: 3, Gly-218 to Cys-225, S0356: 2, S0408: 2, Glu-307 to Asn-312, S0440: 2, L0762: 2, Pro-327 to His-333, L0769: 2, L0372: 2, |
|   | 2813              | 2814   |
| ,   | 109 - 456         | 231 - 2696   |
|   | 638               | 639  |
|   | 1031328           | 1031329  |
| ·   | HOFNZ21           | HOOKH25  |

|   |   |     |   |   |   |   |   |   |      | •    |                     |                     |                     |                     |                     | <del></del>         | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---|---|-----|---|---|---|---|---|---|------|------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Thr-363 to Ser-368, L0646: 2, L0764: 2, | Arg-375 to Val-383, L0773: 2, L0766: 2, |     | Arg-602 to Asp-608, L0663: 2, L0664: 2, | Glu-722 to Ser-734, H0144: 2, L0565: 2, | Glu-739 to Val-744, H0547: 2, H0690: 2, | Glu-746 to His-751, H0659: 2, L0602: 2, | Leu-778 to Phe-784, S0404: 2, L0754: 2, | Pro-790 to Gly-795, L0749: 2, L0777: 2, |      |      | H0484: 1, H0638: 1, | S0418: 1, S0444: 1, | L0717: 1, H0333: 1, | H0156: 1, H0052: 1, | H0545: 1, H0012: 1, | H0083: 1, H0687: 1, | H0674: 1, H0090: 1, | H0063: 1, H0264: 1, | H0100: 1, L0434: 1, | L0351: 1, H0494: 1, | H0561: 1, S0466: 1, | H0641: 1, H0529: 1, | L0763: 1, L0761: 1, | L0667: 1, L0363: 1, | L0650: 1, L0653: 1, | L0654: 1, L0379: 1, | L0607: 1, L0807: 1, | L0635: 1, L0783: 1, | L0383: 1, L0809: 1, |
| Thr-                                    | Arg                                     | Asp | Arg                                     | Glu                                     | -   Glu-                                | -   Gln-                                |   | -o-l                                    | Ala- | Tyr- |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |   | _   |   |   |   | •                                       |   |   |      |      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     | ·-                  |                     |

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|--|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|
|  |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |                     | <i>da.</i> -        |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     | :                                       | ٠ .                 |
| L0666: 1, H0658: 1,<br>H0670: 1, H0648: 1, | H0521: 1, S0406: 1, | L0748: 1, L0731: 1, | L0593: 1, L0595: 1, | S0026: 1, S0276: 1 and | H0422: 1. | S0410: 8, H0620: 5, | H0012: 2, S0040: 1, | S0358: 1, S0132: 1, | H0486: 1, H0706: 1, | H0031: 1, H0628: 1, | H0316: 1, S0036: 1, | H0090: 1, H0038: 1, | H0131: 1, S0144: 1, | L0774: 1, L0789: 1, | L0666: 1, H0144: 1, | L0438: 1, H0435: 1, | H0672: 1, S0328: 1, | H0539: 1, L0731: 1, | S0436: 1 and H0665: 1. | L0766: 4, L0758: 4, | L0773: 3, L0748: 3, | L0751: 3, L0731: 3, | L0759: 3, H0171: 2, | H0013: 2, H0644: 2, | H0616: 2, H0633: 2, | L0805: 2, L0659: 2, | Thr-156 to Asp-161, L0666: 2, L0665: 2, | L0754: 2, L0779: 2, |
|  |                     |                     |                     |                        |           | Gly-1 to Arg-6,     | Glu-26 to Gly-31,   | Gln-70 to Trp-75.   | •                   |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                        | Cys-18 to Lys-24,   | Gly-57 to Gly-63,   | Lys-72 to Ile-81,   | Cys-88 to Glu-93,   | Gly-97 to Glu-116,  | Thr-121 to Val-129, | Lys-137 to Lys-150, | Thr-156 to Asp-161,                     | Gly-177 to Leu-182, |
|  |                     |                     |                     |                        |           | 2815                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2816                |                     |                     |                     |                     |                     |                     |   |                     |
|  |                     |                     |                     |                        |           | 1 - 1092            |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     | •                      | 3 - 1751            |                     |                     |                     |                     |                     |                     |   |                     |
|  |                     |                     |                     |                        |           | 640                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 641                 |                     |                     |                     |                     |                     |                     |   |                     |
|  |                     |                     |                     |                        |           | 1031435             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1031451             |                     |                     |                     |                     |                     |                     |   |                     |
|  |                     |                     |                     |                        |           | HDTIL75             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HPRSB55             |                     |                     |                     |                     |                     |                     |   |                     |

|                                      |                                      |                                      |                              |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                        | 12                  |                     |                        |           |                     |                     |                    |
|--------------------------------------|--------------------------------------|--------------------------------------|------------------------------|----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|--------------------|
| S6024: 1, S0212: 1,                  | S0354: 1, S0046: 1,                  | Т0039: 1, Н0599: 1,                  | H0575: 1, H0036: 1,          | T0110: 1, H0046: 1,        | H0050: 1, L0471: 1, | H0355: 1, H0271: 1, | H0687: 1, H0553: 1, | H0166: 1, H0212: 1, | H0211: 1, H0264: 1, | H0272: 1, H0100: 1, | H0494: 1, S0002: 1, | L0637: 1, L0627: 1, | L0645: 1, L0764: 1, | L0803: 1, L0774: 1, | L0653: 1, L0606: 1, | L0790: 1, L0664: 1, | H0435: 1, H0660: 1, | H0648: 1, H0521: 1, | L0439: 1, L0747: 1, | L0749: 1, L0750: 1, | L0752: 1 and L0596: 1. | L0471: 1, H0617: 1, | L0761: 1, L0768: 1, | H0658: 1, L0754: 1 and | L0779: 1. | AR060: 4, AR089: 2, | AR061: 1, AR096: 1, | AR053: 0, AR052: 0 |
| Glu-213 to Leu-229, S6024: 1, S0212: | Asp-275 to Arg-281, S0354: 1, S0046: | Asp-287 to Trp-299, T0039: 1, H0599: | Lys-302 to Arg-316, H0575: 1 | Leu-338 to Ser-343. T0110: |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                        | Pro-33 to Pro-40,   | Pro-47 to Met-56.   |                        |           |                     |                     |                    |
|                                      |                                      |                                      |                              |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2817                |                     |                        |           | 2818                |                     |                    |
|                                      |                                      |                                      |                              |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 482 - 757           |                     | •.                     |           | 3 - 1328            |                     |                    |
|                                      |                                      |                                      |                              |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 642                 |                     |                        |           | 643                 |                     |                    |
|                                      |                                      |                                      |                              |                            |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                        | 1031606             |                     |                        |           | 1031922             |                     |                    |
|                                      |                                      |                                      |                              |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | · · ·               | ·                   |                     |                        | HPDPY36             |                     |                        |           | HETFJ47             |                     |                    |

|                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                      |                     |                     |                     | _                   |                     |                     |                     |                    |                     |                     |                     |                     |                     | -                   | •                   |                     |                     |                     |                     |
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|                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0596: 7, H0622: 5, | .0747: 5, H0046: 4, | .0372: 4, L0764: 3, | .0662: 3, L0657: 3, | .0783: 3, L0663: 3, | .0752: 3, H0662: 2, | S0356: 2, H0040: 2, | H0538: 2, L0646: 2, | .0771: 2, L0774: 2, | .0805: 2, L0809: 2, | .0666: 2, L.0665: 2, | H0435: 2, H0672: 2, | .0748: 2, L0751: 2, | L0777: 2, L0608: 2, | H0624: 1, H0686: 1, | H0295: 1, H0241: 1, | S0418: 1, S0358: 1, | S0376: 1, S0360: 1, | 0132: 1, H0642: 1, | H0590: 1, H0150: 1, | H0620: 1, H0023: 1, | H0356: 1, H0424: 1, | H0213: 1, H0617: 1, | H0169: 1, H0634: 1, | H0063: 1, T0067: 1, | H0488: 1, H0334: 1, | S0370: 1, S0440: 1, | H0652: 1, L0645: 1, | .0773: 1, L0648: 1, | .0806: 1, L0776: 1, |
|                     |                     | 1                   | 1                   | <u> </u>            |                     | <u>0</u>            |                     | <u>. — .</u>        | <u>.</u>            |                      | <u> </u>            |                     |                     | <u></u>             | <u>, 114.</u>       | 0,                  | <u> </u>            | <u> </u>           | <u></u>             | <u></u>             | <u> </u>            |                     | <u> </u>            | <u> </u>            |                     | <u>U</u>            |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     | 13-                 |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     | . <u> </u>          |                     |                     |                      |                     |                     |                     |                     |                     |                     | _                   |                    | 4                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | _                   |                     | -                   |                     |                     | _                   | <del></del>         |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |
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|                  | -                |                  | <u>-</u>           |                     |                     |                   |                      |                 |                     |                     |                     |                  |                    |                     | ,                  |                     |                  | 4                   | -                |                    |                  |                  | <del></del>      |                  |                  |                  |                     |                    |
|------------------|------------------|------------------|--------------------|---------------------|---------------------|-------------------|----------------------|-----------------|---------------------|---------------------|---------------------|------------------|--------------------|---------------------|--------------------|---------------------|------------------|---------------------|------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------|--------------------|
| I,               |                  |                  | 1,                 |                     | 12: 1.              | .6:               | R104:                | 053:            | 061:                | . 5,                | 3,                  |                  |                    | 2,                  | - 2                | 2,                  | - '              |                     |                  |                    | 1,               |                  | 1,               |                  | 1,               | 1,               |                     | 1,                 |
| L0541: 1, L0789: | L0790: 1, L0664: | S0374: 1, H0689: | H0666: 1, H0478: 1 | L0779: 1, S0436: 1, | H0506: 1 and H0712: | AR096: 10, AR089: | 10, AR060: 7, AR104: | 6, AR033: 5, AR | 5, AR039: 4, AR061: | L0803: 9, H0648: 5, | H0046: 3, L0805: 3, | L0731: 3, S0444: | S0360: 2, S0476: 2 | H0597: 2, H0412: 2, | L0764: 2, L0809: 2 | H0670: 2, L0740: 2, | L0747: 2, L0756: | L0777: 2, S0040: 1, | T0049: 1, S0420: | S0358: 1, S0376: 1 | H0580: 1, L0152: | S0045: 1, S0278: | H0261: 1, S0280: | H0618: 1, H0012: | H0266: 1, H0488: | H0268: 1, S0144: | S0344: 1, S0426: 1, | L0638: 1, L0646: 1 |
|                  |                  |                  |                    |                     |                     |                   |                      |                 |                     |                     |                     |                  |                    |                     |                    |                     |                  |                     |                  |                    |                  |                  |                  |                  |                  |                  |                     |                    |
|                  |                  |                  |                    |                     |                     | 2819              |                      |                 |                     |                     |                     |                  |                    |                     |                    |                     |                  |                     |                  |                    |                  |                  |                  |                  |                  |                  |                     |                    |
|                  |                  |                  |                    |                     |                     | 14 - 1222         |                      |                 |                     |                     |                     |                  |                    |                     |                    |                     |                  |                     |                  |                    |                  |                  |                  |                  |                  |                  |                     |                    |
|                  |                  |                  |                    |                     |                     | 644               |                      |                 |                     |                     |                     |                  |                    |                     |                    |                     |                  |                     |                  |                    |                  |                  |                  |                  |                  |                  |                     |                    |
|                  |                  |                  |                    |                     |                     | 1031988           |                      |                 |                     |                     |                     |                  |                    |                     |                    |                     |                  |                     |                  |                    |                  |                  |                  |                  |                  |                  |                     |                    |
|                  |                  |                  |                    |                     |                     | HMAMI21           |                      |                 |                     |                     |                     |                  |                    |                     |                    |                     |                  |                     |                  |                    |                  |                  |                  | ì                |                  |                  |                     |                    |

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|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|
|  | 104770,             | 110700,             | 135940,             | 145001,             | 146790,             | 152445,             | 152445,             | 159001,             | 174000,             | 179755,             | 182860,             | 182860,             | 182860,             | 191315,             | 230800,             | 230800,             | 266200,             | 600897,                                      | 601105,             | 601412,             |
|  | 1q21                |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |
| L0794: 1, L0804: 1,<br>L0774: 1, L0666: 1,<br>L0664: 1, L0665: 1,<br>S0052: 1, S0374: 1,<br>H0658: 1, H0651: 1,<br>S0028: 1, L0779: 1,<br>L0780: 1, L0755: 1,<br>L0759: 1, H0445: 1 and<br>S0276: 1. | L0775: 9, S0126: 9, | L0750: 7, L0731: 7, | H0670: 5, L0740: 5, | L0770: 4, L0769: 4, | L0768: 4, L0783: 4, | L0752: 4, T0023: 3, | L0764: 3, L0653: 3, | L0776: 3, H0672: 3, | S0046: 2, T0039: 2, | H0318: 2, H0251: 2, | H0545: 2, H0012: 2, | H0373: 2, S0388: 2, | H0266: 2, H0087: 2, | H0100: 2, H0280: 2, | L0368: 2, L0753: 2, | L0755: 2, L0757: 2, | H0595: 2, L0590: 2, | L0592: 2, S6024: 1,                          | H0255: 1, H0664: 1, | H0177: 1, S0360: 1, |
|  | Arg-37 to Ser-44,   | Val-77 to Lys-84,   | Glu-98 to Lys-110.  | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |
|  | 2820                |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |
|  | 343 - 672           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |
|  | 645                 |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |
|  | 1032475             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |  |                     |                     |
|  | 58ОООЭН             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |  |                     |                     |

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| S0408: 1, H0411: 1,<br>H0298: 1, L0622: 1,<br>T0040: 1, L0021: 1,<br>S0049: 1, H0597: 1,<br>H0620: 1, H0597: 1,<br>H0620: 1, H0594: 1,<br>H0163: 1, H0594: 1,<br>H0163: 1, S0464: 1,<br>S0438: 1, H0662: 1,<br>L0773: 1, L0763: 1,<br>L0629: 1, L0763: 1,<br>L0629: 1, L0548: 1,<br>L0788: 1, L0648: 1,<br>H0682: 1, H0648: 1,<br>S0330: 1, S0380: 1,<br>S0027: 1, L0748: 1,<br>L0754: 1, L0758: 1,<br>L0754: 1, L0758: 1,<br>L0759: 1, L0758: 1,<br>L0759: 1, L0758: 1, | H0545: 3, H0046: 3,<br>L0763: 3, L0783: 3,<br>S0358: 2, L0769: 2,<br>L0774: 2, L0809: 2,<br>H0547: 2, S0126: 2,  |
| N T F N T T T T T T T T T T T T T T T T  | Arg-1 to Ala-7, H0545: 3, H0046: Glu-98 to Asp-103, L0763: 3, L0783: 3, Glu-109 to Asp-115, S0358: 2, L0769: 2, Leu-141 to Glu-146, L0774: 2, L0809: 2, Glu-172 to Arg-180. H0547: 2, S0126: 2, S012 |
|  | 1515 - 796 2821  |
|  | 1033653 646  |
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|---|---|---|
|   | L0779: 1, L0777: 1,<br>H0653: 1, S0194: 1 and<br>S0276: 1.<br>S0007: 5, S0010: 1,<br>H0617: 1 and L0769: 1. | AR089: 31, AR053:<br>27, AR096: 26, AR052:<br>25, AR039: 16, AR060: |
|   | Pro-20 to Phe-32,<br>Pro-52 to Phe-59,<br>1.vs-68 to His-74.  | 6   |
| • | 2822  | 2823  |
|   | 179 - 400   | 3 - 431   |
|   | 647   | 648   |
|   | 1034320   | 1034471   |
|   | HEBAE89   | НКОВ 143  |

|                       |                      |    |                     |                     | -                   | _                   |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |   | -                   |                     |                        |                       |                       |                     | ,                   |                     |
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|                       | <del></del>          |    |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>                                   |                     |                     |                        |                       |                       |                     |                     |                     |
| 15, AR033: 13, AR104: | 13, AR055: 6, AR061: | ·· | L0749: 4, L0471: 3, | L0748: 3, L0777: 3, | H0545: 2, H0561: 2, | L0770: 2, L0769: 2, | L0745: 2, L0779: 2, | L0752: 2, L0759: 2, | H0657: 1, H0663: 1, | H0125: 1, S0358: 1, | H0393: 1, H0411: 1, | L0586: 1, H0013: 1, | H0156: 1, H0083: 1, | H0356: 1, H0328: 1, | H0321: 1, H0551: 1, | S0422: 1, L0764: 1, | L0773: 1, L0804: 1, | L0774: 1, L0776: 1, | L0659: 1, H0547: 1, | H0519: 1, H0683: 1, | H0659: 1, H0648: 1,                           | H0672: 1, S0330: 1, | S3014: 1, L0731: 1, | S0031: 1 and H0352: 1. | L0666: 47, H0046: 20, | H0672: 13, L0754: 11, | S0003: 9, L0766: 6, | L0664: 6, L0744: 5, | L0439: 5, L0777: 5, |
|                       |                      |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     | -                   |                     |                     |   |                     |                     |                        |                       |                       |                     |                     |                     |
|                       |                      |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | , <u>, , , , , , , , , , , , , , , , , , </u> |                     |                     |                        | 2824                  |                       | <u> </u>            |                     |                     |
|                       |                      |    |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     | -                   |                     |                     |                     |                     |   |                     |                     |                        | 3152 -                | 2838                  |                     | ٠.                  |                     |
|                       |                      |    | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                        | 649                   |                       |                     |                     |                     |
|                       |                      |    |                     |                     |                     | ,                   |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                        | 1034539               |                       |                     |                     |                     |
|                       |                      |    |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                        | HVVCT43               |                       |                     |                     |                     |

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|---------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------|---------------------|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                    |                    |                    | _                   |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     | <del>.</del>        |                     |                     |                     |              |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |
| .0663: 4. H0658: 4. | 0599: 4, S0214: 3, | 0637: 3, L0521: 3, | 0804: 3, L0438: 3, | H0435: 3, L0752: 3, | S0408: 2, S0046: 2, | H0497: 2, H0590: 2, | H0050: 2, H0644: 2, | H0264: 2, T0041: 2, | S0002: 2, S0426: 2, | 0770: 2, L0794: 2, | 0775: 2, L0665: 2, | H0547: 2, S0126: 2, | H0659: 2, S0152: 2, | H0478: 2, L0786: 2, | .0779: 2, L0731: 2, | .0759: 2, L0608: 2, | H0423: 2, H0624: 1, | H0556: 1, H0686: 1, | 1, S0114: 1, | S0132: 1, H0645: 1, | 1, H0601: 1, | H0270: 1, T0114: 1, | H0013: 1, L0021: 1, | H0599: 1, H0575: 1, | H0318: 1, L0738: 1, | H0327: 1, H0014: 1, | H0373: 1, S0051: 1, | H0021: 1, H0316: 1, | H0040: 1, H0616: 1, |
| 10663:              | 10599:             | L0637:             | L0804:             | H0435:              | S0408:              | H0497:              | H0050:              | H0264:              | S0002:              | L0770:             | 1.0775:            | H0547:              | H0659:              | H0478:              | L0779:              | L0759:              | H0423:              | H0556:              | S0342:       | S0132:              | S0222:       | H0270:              | H0013:              | H0599:              | H0318:              | H0327:              | H0373:              | H0021:              | H0040:              |
|                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                    | •                   |                     |                     | •                   |                     |                     |                     |              |                     |              | ٠                   |                     |                     |                     |                     |                     |                     |                     |
|                     |                    | -                  |                    | _                   | ,                   |                     |                     | <del></del>         | •                   |                    |                    |                     |                     |                     |                     | ·                   |                     |                     |              |                     |              |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |
|                     |                    |                    |                    |                     |                     |                     |                     |                     | ,                   |                    |                    |                     |                     |                     |                     |                     |                     |                     |              |                     |              |                     |                     |                     |                     |                     |                     | ,                   |                     |
|                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |              |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                    |                    |                    | ·                   |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     |              |                     |              |                     |                     | <u>.</u>            |                     |                     |                     |                     |                     |
|                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    | <del></del>        |                     |                     |                     |                     |                     |                     |                     |              |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |

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|                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     | -                   |                        |                     |  |                     | <br>·               |                     |                     |
| H0100: 1, H0625: 1, | H0561: 1, S0440: 1, | H0641: 1, S0144: 1, | S0142: 1, L0598: 1, | H0529: 1, L0369: 1, | L0769: 1, L0646: 1, | L0771: 1, L0662: 1, | L0803: 1, L0774: 1, | L0651: 1, L0805: 1, | L0776: 1, L0659: 1, | L0783: 1, L0791: 1, | L0792: 1, H0519: 1, | H0684: 1, H0670: 1, | H0660: 1, H0648: 1, | S0328: 1, H0518: 1, | H0521: 1, H0522: 1, | H0696: 1, H0555: 1, | H0436: 1, L0758: 1, | H0445: 1, L0684: 1, | H0595: 1, L0588: 1, | S0026: 1, H0543: 1, | H0422: 1 and H0506: 1. | AR055: 8, AR060: 6, |  | AR033: 4, AR061: 3, | L0766: 7, H0591: 3, | H0040: 3, L0794: 3, | H0689: 3, L0752: 3, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | • .                 |                     |                     |                     |                     |                     |                     |                        | Val-39 to Ala-45.   |  |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2825                |  |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 609 - 1022          |  |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 650                 |  |                     |                     |                     |                     |
|                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1035435             |  |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HTTDR30             |  |                     |                     |                     |                     |

|                     |                        |                     | •                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                   |                   |                     | •                          |                            | _                  | <del></del>         |                     |                        |           |                     |                     |                     |
|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|-------------------|-------------------|---------------------|----------------------------|----------------------------|--------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|
| H0581: 2, H0059: 2, | LO / / I: 2, L0809: 2, | L0665: 2, L0749: 2, | H0637: 1, H0497: 1, | T0109: 1, H0036: 1, | H0318: 1, H0039: 1, | H0181: 1, H0038: 1, | H0634: 1, L0637: 1, | L0662: 1, L0649: 1, | L0388: 1, L0776: 1, | L0655: 1, L0658: 1, | L0788: 1, H0520: 1, | H0690: 1, H0670: 1, | H0672: 1, L0751: 1, | L0747: 1, L0750: 1, | L0777: 1, L0758: 1 and | L0361: 1. | H0615: 2          |                   | AR039: 2, AR096: 1, |                            |                            | AR055: 0, AR053: 0 | L0757: 3, L0594: 2, | S0212: 1, L0527: 1, | H0547: 1, S0328: 1 and | L0756: 1. | S0278: 5, H0580: 2, | H0575: 2, H0050: 2, | S0344: 2, L0764: 2, |
|                     |                        | •                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                        |           | Thr-11 to Asn-18, | Gly-25 to Glu-30. | Pro-21 to Asn-31,   | Arg-158 to Lys-170, AR089: | Thr-194 to Leu-200. AR033: |                    |                     |                     |                        |           | His-55 to Arg-63,   | Glu-96 to Val-109,  | Ser-113 to Ala-119, |
|                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2826              |                   | 2827                |                            |                            |                    |                     |                     |                        |           | 2828                |                     |                     |
|                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                        |           | 420 - 316         |                   | 3 - 974             |                            |                            |                    |                     |                     |                        |           | 334 - 1299          |                     |                     |
|                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 651               |                   | 652                 |                            |                            |                    |                     |                     |                        |           | 653                 |                     |                     |
|                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1035602           |                   | 1035988             |                            |                            |                    | •                   |                     |                        |           | 1036583             |                     |                     |
|                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | ,         | HODGO46           |                   | HNTTB23             |                            |                            |                    |                     |                     |                        |           | HVVBV73             |                     |                     |

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|   |  | ,                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
| H0672: 2, T0002: 1,<br>S0134: 1, H0656: 1,<br>S0116: 1, H0706: 1,<br>S0010: 1, H0581: 1,<br>H0375: 1, H0644: 1,<br>H0090: 1, H0087: 1,<br>T0041: 1, S0142: 1,<br>S0002: 1, S0426: 1,<br>L0770: 1, L0667: 1,<br>L0794: 1, L0803: 1,  | LO743: 1, HO321: 1,<br>LO748: 1, LO749: 1,<br>S0260: 1 and H0542: 1. | H0013: 2 and S0126: 1. | L0754: 6, L0758: 6, | L0598: 3, L0756: 3, | H0716: 2, S0358: 2, | S0360: 2, S0007: 2, | H0318: 2, H0052: 2, | L0471: 2, H0615: 2, | L0794: 2, L0766: 2, | L0663: 2, H0658: 2, | L0750: 2, L0731: 2, | H0664: 1, H0638: 1, | S0442: 1, H0741: 1, | H0734: 1, H0229: 1, | H0411: 1, H0415: 1, | H0497: 1, H0574: 1,<br>H0599: 1 H0108: 1 |
| Lys-140 to Tyr-150, H0672: 2, T0002: 1, Glu-157 to Ser-172, S0134: 1, H0656: 1, Gly-174 to Asn-185, S0116: 1, H0706: 1, Arg-223 to Pro-245, S0010: 1, H0581: 1, Leu-264 to Asp-272.H0375: 1, H0030: 1, H0090: 1, H0090: 1, H0097: 1, E0090: 1, S0142: 1, S0002: 1, S0426: 1, L0770: 1, L0667: 1, L0770: 1, L0673: 1, L0653: |  |                        | Gln-1 to Asp-6,     | Gly-11 to Ser-16,   | Pro-21 to Leu-41,   | Ser-44 to Pro-54.   |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
|   |  | 2829                   | 2830                |                     |                     |                     |                     |                     |                     | ٠.                  |                     |                     |                     |                     |                     |  |
|   | t  | 1 - 1812               | 1 - 435             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,  |
|   |  | 654                    | 655                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
|   |  | 1036707                | 1036973             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |
|   |  | HE8MH38                | HTEPV42             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |

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|                     |                     |                     |                     |                     |                     | -                   |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                   |                       |                       |                       |                       |                     |                     |                     |                          |
| S0010: 1, S0474: 1, | H0581: 1, H0050: 1, | S0214: 1, H0030: 1, | H0032: 1, H0113: 1, | H0616: 1, T0067: 1, | H0488: 1, H0059: 1, | S0438: 1, H0538: 1, | L0803: 1, L0805: 1, | <br>L0659: 1, L0809: 1, | L5623: 1, L0788: 1, | L0791: 1, L0793: 1, | L0666: 1, H0520: 1, | H0519: 1, H0684: 1, | H0670: 1, H0521: 1, | L0747: 1, L0749: 1, | L0752: 1, L0759: 1, | S0434: 1, L0596: 1, | L0592: 1, L0362: 1 and | H0423: 1. | AR061: 28, AR033: | 25, AR104: 22, AR055: | 22, AR060: 19, AR089: | 19, AR052: 12, AR039: | 11, AR096: 11, AR053: | L0751: 7, L0769: 6, | L0750: 5, L0752: 5, | H0052: 4, L0771: 4, | LU / / 5: 4, LU / 58: 4, |
|                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Val-10 to Lys-17, | Val-137 to Gly-142,   | Pro-148 to Tyr-167.   | •                     |                       |                     |                     |                     |                          |
|                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     | •                   |                     |                     |                     |                     |                        | ;         | 2831              |                       |                       |                       |                       |                     |                     |                     |                          |
|                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     | ·                   |                     |                     |                     |                        |           | 68 - 902          |                       |                       |                       |                       |                     |                     |                     |                          |
|                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                        | ,         | 959               |                       |                       |                       |                       |                     |                     |                     |                          |
|                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     | -                   |                     |                     |                     |                     |                     |                        |           | 1037108           |                       |                       |                       |                       |                     |                     |                     |                          |
|                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HFTCG52           |                       |                       |                       |                       |                     |                     |                     |                          |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
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| H0556: 3, L0665: 3, | H0486: 2, S0010: 2, | H0620: 2, T0006: 2, | H0181: 2, H0494: 2, | .0774: 2, L0375: 2, | .0776: 2, L0512: 2, | .0659: 2, H0555: 2, | S0206: 2, L0740: 2, | .0747: 2, L.0596: 2, | .0588: 2, S0276: 2, | )624: 1, S0402: 1, | F0049: 1, H0341: 1, | H0662: 1, S0358: 1, | S0376: 1, S0360: 1, | S0045: 1, S0476: 1, | .0717: 1, H0351: 1, | 30222: 1, H0455: 1, | 70114: 1, L0021: 1, | H0618: 1, T0048: 1, | H0318: 1, L0109: 1, | H0309: 1, H0544: 1, | H0546: 1, H0545: 1, | H0009: 1, H0123: 1, | .0471: 1, H0424: 1, | H0031: 1, H0628: 1, | H0617: 1, H0063: 1, | H0059: 1, H0100: 1, | H0625: 1, H0633: 1, | H0646: 1, H0517: 1, | .0770: 1, L0764: 1, |
| )H                  | Ĭ                   | ) <u>H</u>          | H                   | <u> </u>            | <u>1</u>            | <u>⊐</u>            | S                   | ĭ                    | <u>'</u>            | H                  | TC                  | H                   | S                   | <u> </u>            | ĭ                   | S                   | Ĭ                   | H                   | H                   | H                   | H                   | <u>H</u>            | <u> </u>            | <u>H</u>            | H                   | Ĭ                   | 耳                   | Ħ                   | I                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                    |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| -                   |                     |                     |                     |                     |                     |                     | -                   |                      |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |
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| _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                   |                       |                       | <br>  |   |                      |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | :                 |                       |                       |       |   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0766: 1, L0655: 1, | L0657: 1, L0526: 1, | L0783: 1, L0809: 1, | L0544: 1, L0529: 1, | L0664: 1, S0428: 1, | H0593: 1, S0126: 1, | H0682: 1, H0659: 1, | H0670: 1, H0648: 1, | L0611: 1, S0432: 1, | L0756: 1, L0757: 1, | S0436: 1 and S0194: 1. | AR052: 26, AR033: | 22, AR104: 15, AR053: | 14, AR060: 12, AR055: | <br>4 |   | H0360: 14, S0408: 5, | L0774: 5, L0749: 5, | L0775: 4, H0648: 4, | L0623: 3, H0373: 3, | L0520: 3, S0328: 3, | S0406: 3, S0360: 2, | S0222: 2, H0575: 2, | F0082: 2, L0471: 2, | H0494: 2, L0763: 2, | L0769: 2, L0764: 2, | L0517: 2, L0809: 2, | H0684: 2, L0747: 2, | S0031: 2, L0581: 2, |
|                     |                     |                     |                     |                     | , <del></del> -     |                     |                     |                     |                     | .91                    | Asp-64 to Phe-69, | Ċ                     |                       | <br>  |   |                      |                     |                     | <u>,</u>            |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2832              |                       |                       |       |   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | •                   |                     | •                   |                     |                     |                     |                        | 1 - 360           |                       |                       |       | , |                      |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |
|                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 657               |                       |                       |       |   |                      |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1037131           |                       |                       |       |   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HKAOB40           |                       |                       |       |   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     | . ,                 |                   |                     |                     |                     | - 14              |                     |                     |                     | -                   |                     |                     | _                   |                   |                     |                        |
| H0171: 1, T0002: 1, | HU683: 1, 10049: 1, | H065/: 1, S0116: 1, | .0481: 1, H0638: 1, | S0358: 1, S0444: 1, | S0410: 1, H0580: 1, | H0722: 1, S0045: 1, | S0046: 1, S0132: 1, | H0393: 1, T0060: 1, | H0156: 1, H0230: 1, | H0320: 1, H0014: 1, | .0163: 1, S0051: 1, | H0615: 1, S0036: 1, | H0412: 1, H0202: 1, | H0560: 1, S0438: 1, | 440: 1, S0144: 1, | L0772: 1, L0521: 1, | L0662: 1, L0767: 1, | .0768: 1, L5574: 1, | 522: 1, L0659: 1, | .0526: 1, L0782: 1, | .0788: 1, H0689: 1, | H0690: 1, H0658: 1, | H0670: 1, H0672: 1, | S0378: 1, S0404: 1, | S0028: 1, L0779: 1, | .0757: 1, L0758: 1, | 759: 1, S0434: 1, | .0589: 1, S0192: 1, | H0422: 1 and S0424: 1. |
| HOH                 | OH,                 | OH .                | 3                   | S0.                 | <u>0S</u>           | OH.                 | SO .                | <u>0H</u>           | )H                  | OH .                | 20                  | OH T                | OH OH               | OH H                | <u>20</u>         | <u>1</u>            | <u>2</u>            | <u>n</u>            | 10                | <u>10</u>           | <u>01</u>           | <u> </u>            | OH HO               | 80                  | <u>S</u> 0          | <u>1</u>            | 01                | 2                   | HO                     |
|                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                   |                     |                     |                     |                   |                     |                     |                     | -                   |                     |                     |                     |                   |                     |                        |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                   |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                   |                     |                        |
|                     |                     |                     |                     | . <u></u>           |                     |                     | <u></u>             |                     |                     |                     |                     |                     |                     |                     |                   |                     |                     |                     |                   | -                   |                     | -                   |                     |                     |                     |                     |                   |                     |                        |
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|                       |                       |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                     |                     | '.i.                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
|                       |                       |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
|                       |                       |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
|                       |                       |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | -                                       | _                   |
| H0521: 68, H0090: 12, | L0666: 10, L0748: 10, | L0775: 9, H0522: 9, |                     | L0659: 8, H0591: 7, | L0747: 7, L0770: 5,                     | L0664: 5, L0754: 5,                     | H0580: 4, H0486: 4, | H0622: 4, H0644: 4, | H0551: 4, H0494: 4, | L0655: 4, S0374: 4, | L0755: 4, L0759: 4, | S0132: 3, H0013: 3, | H0421: 3, H0553: 3, | H0616: 3, H0641: 3, | S0142: 3, L0766: 3, | L0663: 3, L0665: 3, | H0547: 3, L0756: 3, | L0779: 3, L0752: 3, | S0358: 2, S0376: 2, | S0444: 2, S0360: 2, | S0278: 2, H0431: 2, | H0586: 2, H0575: 2, | H0318: 2, H0581: 2, | H0457: 2, S0003: 2, | H0688: 2, H0039: 2, | H0264: 2, H0529: 2, | L0763: 2, L0769: 2, | L0646: 2, L0803: 2,                     | L0774: 2, H0701: 2, |
| His-8 to Gly-18,      | Phe-25 to Ala-39,     | Val-70 to Ser-75,   | Gln-114 to Gly-121, | Thr-146 to Lys-155, | Gly-213 to Asn-219, L0747: 7, L0770: 5, | Glu-256 to Asp-267. L0664: 5, L0754: 5, | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | . •                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
| 2833                  |                       |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
| 34 - 885              |                       |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | * |                     |
| 859                   |                       |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
| 1037303               |                       |                     |                     |                     |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | •                   |                     |   |                     |
| HPDVE37               |                       |                     |                     |                     |   |   | •                   |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                                       |                     |

|                     |                     |                     | •                   |                     |                     |                     |                    |                     | -                   |                     |                     |                     |                   | •                   | •                   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     | _                   | _                   | -                   |                     |                    |                     |                     |                     |                     |                     | -                 |                     | -                   |                      |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |
| S0380: 2, H0555: 2, | .0439: 2, L0740: 2, | .0777: 2, L0731: 2, | H0445: 2, L0599: 2, | .0608: 2, H0506: 2, | S0040: 1, H0650: 1, | S0116: 1, S0212: 1, | 0356: 1, S0354: 1, | S0468: 1, S0045: 1, | H0619: 1, S6022: 1, | H0370: 1, H0392: 1, | H0497: 1, H0642: 1, | F0114: 1, H0427: 1, | H02511, H0251: 1, | H0596: 1, H0046: 1, | H0086: 1, H0057: 1, | H0083: 1, H0375: 1,  | T0023: 1, H0031: 1, | .0055: 1, H0598: 1, | H0135: 1, H0038: 1, | H0040: 1, H0412: 1, | H0056: 1, T0042: 1, | S0370: 1, H0509: 1, | S0144: 1, S0002: 1, | S0426: 1, L0796: 1, | .0772: 1, L0764: 1, | .0765: 1, L0662: 1, | .0768: 1, L0389: 1, | .0636: 1, L0647: 1, |
| S                   | ᆸ                   |                     |                     | 1                   | S                   | S                   | S                  | <u>S</u>            |                     | <u>i-1-i</u>        | <u>. i-Li</u>       | L                   | <u> </u>          | <u>. 144</u>        | <del></del>         | <del>-  -  -  </del> | L                   | 1                   | <u>, 144 .</u>      | <u>.</u>            |                     | S                   | <u>.</u>            | S                   |                     | <u> </u>            |                     | <br>H               |
|                     |                     |                     |                     |                     |                     |                     |                    | <del></del>         |                     |                     |                     |                     |                   |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | -                   |                     |                    | ·                   |                     | -                   |                     |                     |                   | _                   |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |
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| L0791: 1, H0702: 1, | H0693: 1, H0593: 1,  | · — | S0328: 1, H0539: 1, | S0152: 1, H0479: 1, | S3012: 1, S0027: 1, | S0206: 1, L0744: 1, | L0749: 1, L0757: 1, | S0031: 1, H0707: 1, | L0597: 1, L0605: 1, | H0667: 1, S0242: 1, | H0543: 1, H0423: 1, | H0677: 1 and H0352: 1. | H0618: 3, L0740: 2, | L0749: 2, L0596: 2, | L0597: 2, S0354: 1, | H0580: 1, H0042: 1, | H0253: 1, S0010: 1, | H0172: 1, H0615: 1, | H0412: 1, S0386: 1, | L0648: 1, L0662: 1, | L0768: 1, L0803: 1, | L0774: 1, E0657: 1, | L0809: 1, L0779: 1, | L0758: 1 and H0445: 1. | S0136: 33, L0747: 16, | H0144: 14, L0731: 14, | L0752: 13, S0422: 12, | L0740: 12, L0754: 11, |
|                     | <u> </u>             |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Cys-1 to Glu-6,       | Asp-52 to Asp-65,     | Lys-82 to Pro-88,     | Phe-111 to Ala-123.   |
|                     |                      | _   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2834                |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                        | 2835                  |                       |                       |                       |
|                     |                      |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 95 - 859            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 3 - 434               |                       |                       |                       |
|                     |                      |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 629                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 099                   |                       |                       |                       |
| •                   |                      |     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1037438             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1037480               |                       |                       |                       |
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| L0750: 11, H0038: 10, | S0026: 10, H0556: 9, | S0360: 9, L0665: 9, | H0521: 9, H0616: 8, | .0520: 8, L.0776: 8, | .0664: 8, L0757: 8, | 10009: 7, S0003: 7, | .0655: 7, S0406: 7, | .0748: 7, H0170: 6, | .0471: 6, H0620: 6, | S0440: 6, L0518: 6, | .0749: 6, L0608: 6, | H0341: 5, S0442: 5, | H0351: 5, H0370: 5, | HO013: 5, H0090: 5, | H0551: 5, L0598: 5, | .0375: 5, L0659: 5, | S0126: 5, H0682: 5, | H0648: 5, L0751: 5, | H0543: 5, H0423: 5, | .0005: 4, S0444: 4, | S0007: 4, H0163: 4, | 10494: 4, H0529: 4, | .0769: 4, L0521: 4, | J0775: 4, L0666: 4, | H0659: 4, H0670: 4, | S0027: 4, L0758: 4, | H0542: 4, H0657: 3, | S0212: 3, S0354: 3, | S0408: 3, H0580: 3, |
| L0750: 1              | S0026: 1             | 80360: 9            | H0521: 9            | L0520: 8             | L0664: 8            | H0009: 7            | L0655: 7            | L0748: 7            | 10471: 6            | S0440: 6            | L0749: 6            | H0341: 5            | H0351: 5            | H0013: 5            | H0551: 5            | 1.0375: 5           | S0126: 5            | H0648: 5            | H0543: 5            | L0005: 4            | S0007: 4            | H0494: 4            | L0769: 4            | L0775: 4            | H0659: 4            | S0027: 4            | H0542: 4            | S0212: 3            | S0408: 3            |
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| پ                   | 3,                  | ຕ໌                  | 3,                  | 3,                  | 3,                  | 3,                  | χ,                  | 2,               | 4                   | 4                   | 2,                  | ار.                 | ج,                  | ~໌າ                 | ر<br>م              | ર્ય                 | 4                   | رن<br>د             | 7,                  | ູລ໌                 | 4                   | ર્ય                 | 2,                  | 2,                  | 4                   | 4                   | 4                   | 2,                  | 4                |
| S0476: 3, S0278: 3, | S0222: 3, H0486: 3, | H0687: 3, H0674: 3, | 30448: 3, L0646: 3, | .0662: 3, L0649: 3, | .0774: 3, L0657: 3, | S0374: 3, H0547: 3, | 50328: 3, S3014: 3, | 171:             | H0265: 2, T0002: 2, | S0040: 2, H0716: 2, | H0295: 2, T0049: 2, | S0218: 2, H0656: 2, | S0116: 2, H0638: 2, | S0418: 2, S0420: 2, | S0358: 2, S0045: 2, | H0369: 2, H0431: 2, | H0415: 2, H0592: 2, | H0586: 2, H0574: 2, | F0109: 2, H0250: 2, | S0280: 2, S0010: 2, | H0052: 2, H0050: 2, | H0012: 2, H0051: 2, | S0051: 2, H0266: 2, | H0288: 2, S0214: 2, | H0252: 2, H0428: 2, | H0039: 2, H0673: 2, | H0135: 2, H0063: 2, | H0412: 2, H0623: 2, | :02              |
| S02                 | H04                 | H                   | 106                 | 200                 | 106                 | H05                 | <b>S30</b>          | HOH.             | J. TØ               | H07                 | , T00               | H06                 | H06                 | <b>S</b> 04         | S00                 | HO,                 | H()                 | H0.                 | H02                 | 800                 | )HO                 | HO                  | H02                 | S02                 | HOH.                | ЮH                  | )HO                 | ĎH.                 | H02              |
| 6: 3,               | 2: 3,               | 7:3,                | 8: 3,               | 2: 3,               | 4: 3,               | 4: 3,               | 8: 3,               | 4: 3             | 5:2                 | 0:2,                | 5:2,                | 8: 2,               | 6: 2,               | 8: 2,               | 8: 2,               | 9.2                 | 5:2,                | 6:2,                | 9.2,                | 0:2,                | 2:2                 | 2:2                 | 1:2,                | 8: 2,               | 2. 2,               | 9.2                 | 5: 2,               | 2, 2,               | 0:2,             |
| 247                 | 022                 | 1068                | <u>\$</u>           | 990                 | ,770,               | 037                 | 032                 | H0444: 3, H0171: | 1026                | 400                 | 1029                | 021                 | 0110                | 041                 | 035                 | 1036                | 1041                | 1058                | 010                 | 028                 | 1005                | 1001                | 2005                | 1028                | 1025                | 1003                | 1013                | 1041                | S0150: 2, H0207: |
| S                   | S                   | <u> </u>            | <u>(7)</u>          | <u> </u>            | .==                 | S                   | S                   | <u> </u>         | 14                  | S                   | بط.                 | S                   | S                   | S                   | <u>v</u>            | <u>14</u>           | <u> </u>            | <u> </u>            | E                   | S                   | <u>щ</u>            | <u> </u>            | S                   | <u> </u>            | <u> </u>            | <u>ئلز</u>          | <u>بالن</u>         | <u>نطنز</u><br>ا    | S                |
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| H0641: 2, S0142: 2, | S0344: 2, L0770: 2, | J0771: 2, L0766: 2, | .0558: 2, L0519: 2, | H0520: 2, H0684: 2, | 10435: 2, H0710: 2, | H0696: 2, H0704: 2, | H0134: 2, H0436: 2, | S0028: 2, L0756: 2, | .0753: 2, H0445: 2, | S0434: 2, L0588: 2, | 122: 2, S0470: 1, | H0686: 1, H0685: 1, | S0342: 1, H0294: 1, | S0114: 1, S0134: 1, | H0583: 1, H0484: 1, | 63: 1, H0241: 1, | H0176: 1, S0356: 1, | 08: 1, H0637: 1, | H0152: 1, S0046: 1, | 519: 1, H0645: 1, | 111: 1, H0438: 1, | H0600: 1, H0497: 1, | H0642: 1, H0331: 1, | Γ0039: 1, H0635: 1, | H0427: 1, H0156: 1, | H0097: 1, H0575: 1, | H0706: 1, H0390: 1, | H0581: 1, H0421: 1, | H0434: 1, H0196: 1, |
| 90H                 | S03                 | 107                 | 105                 | HOS                 | H04                 | 90H                 | H01                 | 800<br>S            | 107                 | S04                 | H04               | 90H                 | S03                 | S01                 | H05                 | H06              | H01                 | 100<br>T         | H01                 | H06               | H04               | H06                 | H06                 | <u>T</u> 00         | H04                 | HOC                 | H07                 | H05                 | H04                 |
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| 597:             | 530:             | l, H0545: | 900              | 569:             | 123:             | 373:             | 510:             | H0099: 1, H0267: | 328:             | 622:             | . :900           | H0316: 1, H0591: | 634:             | H0413: 1, H0100: | 70041: 1, H0334: | 10560: 1, H0625: | S0438: 1, H0647: 1, | S0144: 1, H0538: 1 | JNKWN: 1, L0369: 1, | .0762: 1, L.0637: 1 | 373:             | 773:             | . 979            | 794:             | 378:             | 629:             | .0383: 1, L0382: | ( |
| 1, H0            | 1, HC            | 1, HC     | 1, NG            | 1, HC            | 1, T0            | 1, HC            | 1, HC            | 1, HC            | 1, H0            | 1, H(            | 1, H0               | 1, H0              | Ä. j.               | 1,10                | 1,15             | 1,10             | 1, LO            | 1, 1.0           | 1, 13            | 1, LO            | 1,10             | • |
| L0040: 1, H0597: | H0327: 1, H0530: | H0544: 1  | H0046: 1, N0006: | H0570: 1, H0569: | H0172: 1, H0123: | H0010: 1, H0373: | H0083: 1, H0510: | .660             | H0290: 1, H0328: | H0535: 1, H0622: | .0483: 1, T0006: | 316:             | H0040: 1, H0634: | )413:            | 041:             | 560:             | 438:                | 144:               | VKW                 | 762:                | .0761: 1, L0373: | .0764: 1, L0773: | .0648: 1, L0626: | .0767: 1, L0794: | .0386: 1, L0378: | .0805: 1, L0629: | 383:             |   |
| 13               | 丑                | $\Xi$     | $\Xi$            | H                | Ħ                | 兰                | 旦                | Ħ                | H                | 王                | <u> </u>         | Ħ                | Ħ                | Ħ                | 2                | Ħ                | <u>80</u>           | <u>S</u>           | 5                   | <u> </u>            | <u> </u>         | 3                | <u>ප</u>         | 2                | 2                | 2                | 2                | ٔ |
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| _                |                  | ,         |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                     |                    |                     |                     |                  |                  |                  |                  |                  |                  |                  |   |
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|                  |                  |           |                  |                  |                  |                  |                  |                  |                  | ·                |                  |                  |                  |                  |                  |                  |                     |                    |                     |                     |                  |                  |                  |                  |                  |                  |                  | _ |
|                  |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | -                   |                    |                     |                     |                  |                  |                  |                  |                  |                  |                  |   |
| •                |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                     |                    |                     |                     |                  |                  |                  |                  |                  |                  |                  |   |
|                  |                  |           |                  |                  | • .              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                     |                    |                     |                     |                  |                  |                  |                  |                  |                  |                  |   |
|                  |                  |           |                  |                  |                  |                  |                  |                  |                  |                  | <u></u>          |                  |                  |                  |                  |                  |                     |                    |                     |                     | <u></u>          |                  |                  |                  |                  |                  |                  | _ |
|                  |                  | ٠         |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                     |                    |                     |                     |                  |                  |                  |                  |                  |                  |                  |   |
|                  |                  |           |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                     |                    |                     |                     |                  |                  |                  |                  |                  |                  |                  |   |

|  |   |   |                    |  |          |                     |                     |                     |                        |           | 141750,             | 141800,             | 141800,             | 141800,             | 141800,             | 141850,             | 141850,             | 141850,             | 141850,             |
|--|---|---|--------------------|--|----------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| ·  |   |   |                    |  |          |                     | • .                 |                     |                        |           | 16p13.3             |                     |                     |                     |                     |                     |                     |                     |                     |
| L0789: 1, L0663: 1,<br>S0428: 1, H0701: 1,<br>L0565: 1, H0519: 1,<br>H0593: 1, H0689: 1, | H0658: 1, H0672: 1,<br>S0330: 1, H0539: 1,<br>S0378: 1, S0380: 1, | H0709: 1, S0152: 1,<br>S0332: 1, S0044: 1,<br>S0188: 1 H0187: 1 | 0356: 1, H0478: 1, | 1062/: 1, H0631: 1,<br>20611: 1, S0206: 1, |          | .0786: 1, H0343: 1, | H0668: 1, H0136: 1, | S0194: 1, S0196: 1, | S0460: 1, H0506: 1 and | H0008: 1. | L0747: 5, H0424: 4, | H0617: 4, L0769: 3, | .0526: 3, S3014: 3, | 70/48: 3, LU/50: 3, | 10661: 2, H0663: 2, | H0392: 2, H0156: 2, | H0123: 2, H0033: 2, | H0213: 2, H0059: 2, | L0763: 2, L0542: 2, |
| <u> </u>   | <u> </u>  | <u>.</u>  |                    | <b>7</b>                                   | <u> </u> | <u> </u>            | <del>-1  </del>     | <u> </u>            | <u> </u>               | 1         | Gly-1 to Thr-11.    |                     |                     |                     | <b></b>             | <del></del>         |                     |                     |                     |
|  |   |   | · ,                |  |          |                     |                     |                     |                        |           | 2836                |                     |                     |                     |                     |                     |                     |                     |                     |
|  | · .   |   |                    |  |          | -                   |                     |                     |                        |           | 2 - 520             |                     |                     |                     |                     |                     |                     |                     | •                   |
|  |   |   |                    |  |          |                     |                     |                     |                        |           | 199                 |                     |                     |                     |                     |                     |                     |                     |                     |
| ·  |   |   |                    |  |          |                     |                     |                     |                        |           | 1038344             |                     |                     |                     |                     | •                   |                     | -                   |                     |
|  |   |   |                    |  |          |                     |                     |                     |                        |           | HPAMM72             |                     |                     |                     |                     |                     |                     |                     |                     |

| 156850,<br>186580,<br>191092,<br>600140,<br>600273,<br>601313,   |  |  |
|--|--|--|
|  |  | 22q13.33   |
| L0779: 2, L0731: 2,<br>L0757: 2, L0605: 2,<br>L0615: 1, S0342: 1,<br>H0580: 1, S0278: 1,<br>H0550: 1, S0280: 1,<br>L0021: 1, T0048: 1,<br>H0052: 1, H0544: 1,<br>H0545: 1, L0471: 1, | H0014: 1, 10022: 1, H0014: 1, N0007: 1, S0051: 1, H0083: 1, H0688: 1, H0708: 1, H0680: 1, L0770: 1, L0764: 1, L0771: 1, L0809: 1, L0545: 1, H0659: | S0260: 1, 2077: 1,<br>S0260: 1, S0276: 1 and<br>S0196: 1.<br>H0617: 14, H0521: 11,<br>L0794: 4, H0542: 4,<br>H0638: 3, S0360: 3,<br>L0648: 3, L0659: 3,  |
|  |  | Thr-1 to Gly-8, L0794: 4, H0542: 4, Gln-142 to Gly-150, H0648: 3, L0659: 3, Pro-274 to Leu-282, L0648: 3, L0659: 3, S050 |
|  |  | 2837   |
|  |  | 21 - 1559  |
|  |  | 662  |
|  |  | 1038378  |
|  |  | HKZAT03  |

|   |  |  |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |    |   |                     |                     |                     |                     |                     |                        |           | 103950,<br>112410, |
|---|--|--|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----|---|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|--------------------|
|   | •                                      |  |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |   |                     |                     |                     |                     |                     |                        |           | 12p12.3-<br>p12.1  |
| L0665: 3, S0328: 3,                     | H0518: 3, H0423: 3,                    | S0358: 2, H0622: 2,                    | H0641: 2, L0763: 2,                     | L0663: 2, L0664: 2, | H0689: 2, H0522: 2, | H0555: 2, H0422: 2, | H0624: 1, H0585: 1, | H0657: 1, H0671: 1, | H0402: 1, S0376: 1, | H0580: 1, S0278: 1, | H0549: 1, H0602: 1, | H0586: 1, H0069: 1, | H0635: 1, H0581: 1, | H0546: 1, H0510: 1, | H0179: 1, H0271: 1, | H0644: 1, H0606: 1, | H0090: 1, H0634: 1, | H0551: 1, H0488: 1, | Ξ, |   | L0804: 1, L0607: 1, | L0657: 1, L0809: 1, | L0790: 1, L0666: 1, | H0593: 1, H0684: 1, | H0672: 1, H0710: 1, | S0434: 1, S0436: 1 and | S0196: 1. |                    |
| Pro-396 to Leu-402, L0665: 3, S0328: 3, | Arg-405 to Glu-410, H0518: 3, H0423: 3 | Gly-436 to Ala-442, S0358: 2, H0622: 2 | Arg-470 to Pro-476, H0641: 2, L0763: 2, | Pro-481 to Leu-486. |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |   |                     |                     |                     |                     |                     |                        |           |                    |
|   |  |  |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |   |                     |                     |                     |                     |                     |                        |           | 2838               |
|   |  |  |   | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    | · |                     |                     |                     |                     |                     |                        |           | 228 - 356          |
|   |  |  |   |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |    |   |                     |                     |                     |                     |                     |                        |           | 999                |
|   |  |  | -                                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |   |                     |                     |                     |                     |                     |                        |           | 1038717            |
|   |  |  |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    | , |                     |                     |                     |                     |                     |                        |           | НДОМА85            |

| 150100, | 168470, | 190070, | 190070, | 200990, | 960209 | 103950,               | 112410,               | 150100,             | 168470,             | 190070,             | 190070,             | 200990,             | 602096              |                     |                     |                     | _                   | <u>.</u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------|---------|---------|---------|---------|--------|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|         |         |         |         |         |        | 12p12.3-              | p12.1                 | <b>1</b>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|         |         |         |         |         |        | L0748: 34, L0777: 15, | S0438: 11, S0192: 11, | L0608: 7, H0331: 6, | H0574: 6, L0771: 6, | S0027: 6, L0756: 6, | H0632: 5, L0731: 5, | S0360: 4, H0427: 4, | L0662: 4, L0744: 4, | L0779: 4, L0757: 4, | S0242: 4, S0354: 3, | S0408: 3, H0494: 3, | H0509: 3, L0770: 3, | L0775: 3, L0809: 3, | L0666: 3, H0519: 3, | H0648: 3, S3014: 3, | S0028: 3, L0750: 3, | H0661: 2, S0442: 2, | S0358: 2, S0376: 2, | S0444: 2, H0013: 2, | S0280: 2, H0309: 2, | H0545: 2, H0510: 2, | H0032: 2, H0551: 2, | S0142: 2, S0422: 2, | L0774: 2, L0806: 2, |
|         |         | ,       |         |         |        | Ala-14 to Asp-19,     | ~                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|         |         |         |         |         |        | 2839                  |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|         |         |         |         |         |        | 3 - 578               |                       |                     | •                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | _                   |                     |                     |                     |                     |                     |                     | _                   |                     |                     |
|         |         |         |         |         |        | 499                   |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |
|         |         |         |         |         |        | 1038718               |                       |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|         |         |         |         |         |        | HVCCQ82               | ,                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                     |  |                     |                     |              |                     |                     |              |                 |              | <del>,</del> - | •                | -                  |                  |                  |                  |                  |                  |  |                     |                  |                  |                  |                |                  |                  |                   |              |                  |                  |
|---------------------|--|---------------------|---------------------|--------------|---------------------|---------------------|--------------|-----------------|--------------|----------------|------------------|--------------------|------------------|------------------|------------------|------------------|------------------|--|---------------------|------------------|------------------|------------------|----------------|------------------|------------------|-------------------|--------------|------------------|------------------|
|                     |  |                     |                     | <u>.</u>     |                     | <u> </u>            |              |                 |              |                |                  | 1 \$ (0)           |                  | <del></del>      | ,                |                  |                  |  | 4                   |                  |                  |                  |                |                  |                  |                   |              | <del>.</del>     |                  |
| 2,                  | .,   | 2,                  | 2,                  | 2,           | 2,                  | 1,                  | 1,           | . <del></del> . |              | 1,             | . <del>.</del> . | 1,                 | <del>-</del>     | 1,               | .1;              | 1,               | : 1,             | .1,                                    | 1,                  | 1,               | 1,               | 1,               | 1,             |                  | 1,               | 1,                | 1,           | 1,               | : 1,             |
| .0776: 2, L0518: 2, | JOS32: 2, S0374: 2,                          | H0547: 2, H0435: 2, | H0696: 2, S0206: 2, | 2: 2, L0755: | L0758: 2, H0668: 2, | S0194: 2, H0170: 1, | 5: 1, S0116: | 8: 1, H0339     | 5: 1, S0278: | 2: 1, H0586:   | 7: 1, H0486      | L0021: 1, H0003: 1 | H0147: 1, H0421: | H0546: 1, S0050: | H0014: 1, H0015: | S0051: 1, H0355: | H0375: 1, H0031: | H0628: 1, H0038:                       | S0014: 1, S0466: 1, | S0440: 1, H0633: | H0646: 1, S0344: | S0210: 1, S0002: | 71: 1, L.0638: | J0772: 1, L0373: | .0764: 1, L0522: | .0803: 1, L.0526: | 5: 1, L0787: | .0790: 1, L0663: | H0520: 1, H0593: |
| L077                | L053   | H054                | 590H                | S003         | L075                | S019                | 14068        | H063            | S004         | S602           | H049             | <u>1</u> 007       | H014             | H054             | H001             | 8005             | H037             | H062                                   | S001                | 804<br>804       | 90H              | S021             | L037           | L077             | 1.076            | 1080<br>1080      | L054         | L079             | H052             |
|                     |  |                     |                     | •            |                     |                     |              |                 |              |                |                  |                    |                  |                  |                  |                  |                  |  |                     |                  |                  |                  |                |                  |                  |                   |              |                  |                  |
|                     | ,  |                     |                     |              |                     |                     |              |                 |              |                |                  |                    |                  |                  |                  |                  |                  |  |                     |                  |                  |                  |                |                  |                  |                   |              |                  |                  |
|                     |  |                     |                     |              |                     |                     |              |                 |              |                |                  |                    | ·                |                  |                  |                  | ·- <u>-</u>      |  |                     |                  |                  |                  |                |                  |                  | •                 |              |                  |                  |
|                     | <u>.                                    </u> |                     |                     |              | •                   |                     |              |                 |              | <u> </u>       |                  |                    | <del></del>      |                  |                  |                  |                  |  |                     |                  |                  |                  |                |                  | -                |                   |              |                  |                  |
|                     |  |                     |                     |              |                     |                     |              |                 | ,            |                |                  |                    |                  |                  |                  |                  |                  | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                     |                  |                  |                  |                |                  |                  | <del></del>       |              |                  |                  |
|                     |  |                     |                     |              |                     |                     |              |                 |              |                |                  |                    |                  |                  |                  |                  |                  |  |                     |                  |                  |                  |                |                  |                  |                   |              |                  |                  |

|                     |                     |                     |                     |                     |                        |           |                        |           |                       |                       |                       |                     |                     |                     | •                   |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|------------------------|-----------|-----------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                        |           |                        |           |                       |                       |                       |                     |                     |                     |                     |                     | •                   | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| S0126: 1, H0682: 1, | H0660: 1, H0666: 1, | S0392: 1, H0345: 1, | L0742: 1, L0439: 1, | L0740: 1, L0753: 1, | H0444: 1, H0653: 1 and | S0196: 1. | H0435: 2, S0218: 1 and | H0415: 1. | L0747: 26, L0740: 20, | L0748: 18, L0752: 14, | L0745: 13, L0599: 11, | L0659: 8, H0509: 7, | L0756: 7, L0777: 7, | S0222: 6, S0010: 6, | L0764: 6, L0776: 6, | L0666: 6, L0754: 6, | L0746: 6, H0013: 5, | S0346: 5, H0050: 5, | L0750: 5, L0758: 5, | S0360: 4, H0574: 4, | H0632: 4, S0280: 4, | L0471: 4, H0039: 4, | H0622: 4, L0766: 4, | L0774: 4, L0783: 4, | H0445: 4, L0366: 4, | H0586: 3, H0251: 3, | H0014: 3, T0010: 3, | H0644: 3, L0769: 3, |
|                     |                     |                     | -                   |                     |                        |           |                        |           |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | 2840                   |           | 2841                  |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     | ,                   |                     |                     |                        |           | 22 - 528               |           | 1 - 2418              |                       |                       |                     |                     |                     |                     | <del>-</del>        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |
|                     |                     |                     |                     | :                   |                        |           | 999                    |           | 999                   |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | •                   |                        |           | 1038915                |           | 1039017               |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | :                   |                        |           | HTGFP54                |           | HBODF41               |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                    |                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |         |                     |                     |                     |                     |                     | <del></del>         |                    |                     |                    |                     |                  |                     |                  |
|--------------------|---------------------|--------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|--------------------|---------------------|------------------|---------------------|------------------|
|                    |                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                    |                     |                    |                     |                  |                     |                  |
|                    |                     |                    |                     |                     | ·                    |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                    |                     |                    | _                   |                  |                     |                  |
|                    |                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |         |                     |                     |                     |                     | •                   |                     |                    |                     |                    |                     |                  |                     |                  |
|                    |                     |                    | <u> </u>            |                     |                      |                     |                     |                     |                     |                     |                     |                      | · · · · · ·         |                     |                     |         |                     |                     |                     |                     |                     |                     |                    |                     |                    | -                   |                  | -                   |                  |
| 1:3,               | . <del>4</del> .3,  | 1: 3,              | 6: 3,               | 8: 2,<br>2,         | 30: 2,               | 92: 2,              | 27: 2,              | 06: 2,              | 66: 2,              | 53: 2,              | 12: 2,              | 53: 2,               | 52: 2,              | 75: 2,              | <u>‡</u> ,2         | 90: 2,  | 70: 2,              | 39: 2,              | 4: 2,               | 1: 2,               | 5: 2,               | 2: 2,               | 24: 1,             | 12: 1,              | 50: 1,             | 1:1,                | 62: 1,           | 12: 1,              | ¥: 1,            |
| 3, 1.076           | 3, L074             | 3, L073            | 3, L059             | 2, S035             | 2, H <sub>0</sub> 58 | 2, H03              | 2, H04              | 2, N00              | 2, H02              | 2, H05              | 2, S014             | 2, 1.076             | 2, L066             | 2, 1.077            | 2, H01              | 2, H06  | 2, H06              | 2, H05              | 2, \$301            | 2, S003             | 2, LO60             | 2, S019             | 2, H06             | 1, S03 <sup>2</sup> | 1, H06             | 1, 8000             | 1, H06           | 1, S044             | l, S044          |
| .0796: 3, L0761: 3 | .0663: 3, L0744: 3, | J0751: 3, L0731: 3 | .0759: 3, L0596: 3, | 50418: 2, S0358: 2, | S0376: 2, H0580: 2,  | H0393: 2, H0392: 2, | H0592: 2, H0427: 2, | H0052: 2, N0006: 2, | H0024: 2, H0266: 2, | H0428: 2, H0553: 2, | H0633: 2, S0142: 2, | .0598: 2, L.0763: 2, | .0646: 2, L0662: 2, | J0803: 2, L0775: 2, | .0809: 2, H0144: 2, | 0438: 2 | H0435: 2, H0670: 2, | H0651: 2, H0539: 2, | S0378: 2, S3014: 2, | .0749: 2, S0031: 2, | S0434: 2, L0605: 2, | .0591: 2, S0192: 2, | H0506: 2, H0624: 1 | F0002: 1, S0342: 1  | F0049: 1, H0650: 1 | S0212: 1, S0001: 1, | H0384: 1, H0662: | S0356: 1, S0442: 1, | S0354: 1, S0444: |
| 12                 | ì                   | <u> </u>           | ጋ                   | <u>S</u>            | <u> </u>             | 田                   | H                   | 王                   | 王                   | 프                   | 王                   | <u> </u>             | 그                   | 그                   | <u> </u>            |         | <u> </u>            | 王                   | Ø                   | 크                   | <u>S</u>            | <u> </u>            | 프                  | <u> </u>            | H                  | <u> </u>            | 五                | <u>w</u>            | Š                |
|                    |                     |                    |                     | j .                 |                      | ٠                   |                     |                     |                     |                     |                     |                      |                     |                     |                     |         |                     |                     |                     |                     |                     | •                   |                    |                     |                    |                     |                  |                     |                  |
|                    |                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |         |                     |                     |                     | •                   |                     |                     |                    |                     |                    |                     |                  |                     |                  |
| -                  |                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                    |                     |                    |                     |                  |                     |                  |
|                    |                     |                    |                     |                     | ,                    |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                    |                     | _                  | _                   |                  |                     |                  |
|                    |                     |                    |                     |                     |                      |                     | •                   |                     |                     |                     |                     |                      |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                    |                     |                    |                     |                  |                     |                  |
| -                  |                     |                    |                     |                     |                      |                     | _                   |                     |                     | ·                   |                     |                      |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                    |                     |                    |                     |                  |                     |                  |
| _                  |                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                      |                     |                     | -                   |         |                     |                     |                     |                     |                     |                     |                    |                     |                    | _                   |                  |                     |                  |
|                    |                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                      |                     |                     | •                   |         |                     |                     |                     |                     |                     |                     |                    |                     |                    |                     |                  |                     |                  |
|                    | _                   |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                    | <del>,</del>        |                    |                     |                  |                     |                  |
|                    | -                   |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |         |                     |                     |                     |                     |                     |                     | •                  |                     |                    | ,                   |                  |                     |                  |
|                    |                     |                    |                     |                     |                      |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |         |                     |                     |                     |                     |                     |                     |                    |                     |                    |                     |                  |                     |                  |

|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| S0408: 1, S0410: 1, | H0229: 1, H0208: 1, | S0045: 1, S0046: 1, | H0619: 1, H0645: 1, | H0411: 1, H0261: 1, | S6016: 1, H0431: 1, | H0438: 1, H0587: 1, | H0643: 1, H0331: 1, | H0599: 1, S0049: 1, | H0596: 1, H0545: 1, | H0123: 1, H0057: 1, | H0373: 1, S0051: 1, | H0083: 1, H0355: 1, | H0687: 1, H0048: 1, | H0212: 1, S0364: 1, | H0361: 1, H0090: 1, | H0038: 1, H0087: 1, | L0060: 1, H0551: 1, | H0264: 1, S0386: 1, | H0100: 1, L0370: 1, | T0042: 1, S0352: 1, | S0440: 1, H0646: 1, | S0210: 1, S0422: 1, | L0770: 1, L0800: 1, | L0771: 1, L0773: 1, | L0648: 1, L0768: 1, | L0522: 1, L0632: 1, | L0805: 1, L0607: 1, | L0512: 1, L0791: 1, | L0792: 1, S0053: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |
|                     |                     |                     | -                   |                     |                     |                     |                     | •                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     | <del></del>         | -                   |                     |                     |                     |                     |                     |                     |
|                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | .                   |

| S0374: 1, H0593: 1,<br>H0659: 1, S0152: 1,<br>H0696: 1, H0704: 1,<br>H0436: 1, L0609: 1,<br>S0390: 1, S0037: 1,<br>S0027: 1, L0741: 1,<br>L0755: 1, H0444: 1,<br>L0485: 1, L0581: 1,<br>H0667: 1, L0996: 1 and<br>S0194: 1. | L0748: 14, L0766: 11,<br>L0803: 4, L0776: 3,<br>L0747: 3, L0749: 4,<br>L0747: 3, L0749: 3,<br>L0791: 2, L0438: 2,<br>H0435: 2, L0779: 2,<br>L0780: 2, S0192: 2,<br>L0780: 1, S6024: 1,<br>S0134: 1, H0583: 1,<br>R0222: 1, H0421: 1,<br>H0538: 1, H0620: 1,<br>L0764: 1, L0662: 1,<br>L0774: 1, L0805: 1,<br>L0774: 1, L0805: 1,<br>L0774: 1, L0805: 1,<br>L0666: 1, L0792: 1,<br>H0659: 1, H0670: 1,<br>H0659: 1, L0740: 1, |
|---|--|
|   | Arg-115 to Gln-127, Leu-137 to Val-150.  |
|   | 2842   |
|   | 45 - 494   |
|   |  |
| ,   | 1039068  |
|   | HRODW53  |

|                     |                        | 102578,          | 109700,           | 151670,           | 154550,           | 601780            |                     |                     |                     |                     |                     | <del></del>         |                     |                 |      |                     |                     |                     |                     |                     |                     | •                   |                     |                     | ,                   |                     |                     |                     |                     |
|---------------------|------------------------|------------------|-------------------|-------------------|-------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------|------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                        | 15q22            |                   |                   |                   |                   | ,                   |                     |                     |                     |                     |                     |                     |                 |      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |
| L0750: 1, L0758: 1, | S0106: 1 and S0446: 1. | H0682: 1         |                   |                   |                   |                   |                     |                     |                     |                     |                     |                     |                     |                 |      |                     |                     | H0617: 7, L0771: 6, | S0408: 4, S0358: 3, | H0638: 2, L0761: 2, | L0764: 2, L0655: 2, | L0634: 2, L0666: 2, | H0435: 2, L0751: 2, | L0777: 2, H0506: 2, | H0650: 1, H0254: 1, | H0255: 1, S0444: 1, | H0351: 1, H0549: 1, | H0600: 1, H0592: 1, | L0022: 1, H0744: 1, |
|                     |                        | Pro-7 to Pro-17, | Leu-20 to Gly-26, | Leu-48 to Val-54, | Pro-65 to Asn-70, | Glu-90 to Ala-95, | Ala-102 to Gln-116, | Glu-122 to Leu-137, | Val-183 to Leu-192, | Ala-235 to Ile-256, | Gly-264 to Asp-270, | Phe-282 to Ile-288, | Arg-309 to Ala-314, | Asn-330 to Asp- | 336, | Ala-338 to Asp-344, | Lys-358 to Lys-367. | Val-43 to Tyr-48,   | Pro-50 to Ser-57,   | Thr-75 to Gly-83,   | Tyr-95 to Asn-105,  | Tyr-155 to Trp-163. | 1                   |                     |                     |                     |                     |                     |                     |
|                     |                        | 2843             |                   |                   |                   |                   |                     | •                   |                     |                     |                     |                     |                     |                 |      |                     |                     | 2844                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                        | 1 - 1242         |                   |                   |                   |                   |                     | -                   | •                   |                     |                     |                     |                     |                 |      |                     | -                   | 155 - 745           |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |
|                     |                        | 899              |                   |                   |                   |                   |                     |                     |                     |                     |                     |                     |                     |                 |      |                     |                     | 699                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                        | 1039290          |                   |                   |                   |                   |                     |                     |                     |                     |                     |                     |                     |                 |      |                     |                     | 1039491             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                        | HPAMC60          |                   |                   |                   |                   |                     |                     |                     |                     |                     |                     |                     |                 |      |                     |                     | HLMHM83             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| H0204: 1, H0231: 1,<br>S0440: 1, L0800: 1,<br>L0643: 1, L0648: 1,<br>L0662: 1, L0776: 1,<br>L0664: 1, S0216: 1,<br>H0690: 1, H0672: 1,<br>S0378: 1, S0406: 1,<br>H0555: 1, L0747: 1 and | L0748: 13, L0731: 8,<br>H0046: 7, L0740: 7,<br>L0758: 7, L0766: 6,<br>L0665: 5, L0747: 5,<br>L0749: 5, H0135: 4,<br>L0769: 4, L0776: 4,<br>L0752: 4, L0776: 4,<br>L0752: 4, L0777: 4,<br>S0222: 3, S0474: 3,<br>H0424: 3, H0265: 3,<br>L0662: 3, L0783: 3,<br>H0573: 2, H0717: 2,<br>H0581: 2, H0575: 2,<br>H0581: 2, H0575: 2,<br>H0581: 2, L0483: 2,<br>L0738: 2, L0483: 2,<br>L0738: 2, L0483: 2,<br>L0761: 2, L0761: 2, |
|---|---|
| H0204: 1, H0231: S0440: 1, L0800: L0643: 1, L0648: L0662: 1, L0776: L0664: 1, S0216: H0690: 1, H0672: S0378: 1, S0406: H0555: 1, L0747: S0436: 1  | <u>,                                    </u>  |
|   | Phe-27 to Gly-32,<br>Tyr-45 to Glu-57,<br>Gly-80 to Asn-89,<br>Ser-182 to Pro-187,<br>Asp-270 to Ser-278,<br>Tyr-288 to Trp-293.  |
|   | 2845  |
|   | 84 - 1142   |
|   | 0.09  |
|   | 1039538   |
| ·   | HOUDK70   |

|                     |                     |                     |                     |                     |                     |                     |                     | -                   |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     | · ——                |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     | _                   |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| .0652: 2, L0654: 2, | .0666: 2, H0659: 2, | .0754: 2, L0485: 2, | .0608: 2, L0601: 2, | S0026: 2, H0423: 2, | 10686: 1, S0040: 1, | H0657: 1, S0212: 1, | H0662: 1, S0420: 1, | S0442: 1, S0358: 1, | 0444: 1, T0008: 1, | H0728: 1, S0045: 1, | 30476: 1, S6026: 1, | .0717: 1, H0550: 1, | H0392: 1, H0333: 1, | 10632: 1, T0040: 1, | H0250: 1, H0156: 1, | H0599: 1, H0706: 1, | H0421: 1, H0597: 1, | H0009: 1, L0471: 1, | 10620: 1, H0015: 1, | H0051: 1, S0051: 1, | H0083: 1, S0250: 1, | H0428: 1, T0006: 1, | H0553: 1, H0617: 1, | H0673: 1, H0169: 1, | 10674: 1, H0068: 1, | H0316: 1, H0412: 1, | H0413: 1, H0561: 1, | H0509: 1, H0641: 1, | H0633: 1, H0647: 1, |
|                     | . <u></u>           | <u>.</u>            | <u> </u>            | S                   | <u> </u>            | <u> </u>            | <u> </u>            | S                   |                    | <u> </u>            | S                   | <u></u>             | <u> </u>            |                     | <b>正</b> .          | <u> </u>            | <u> </u>            | <u>. E.</u>         | <u> </u>            | .连.                 | . <b>II</b>         |                     | <u> </u>            | H                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     | •                   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     | -                   |                     |                     |                     |                     | _                   |                     |                    |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     | -                   |                     | •                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del> -       |                     |                     |

|                     |                     |    | , | ø                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 106180,              | 115660,             | 138700,             | 139250,             | 148500,                                 | 150200,                                | 154275,             | 162100,             | 170500,             | 170500,             |
|---------------------|---------------------|----|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|----------------------|---------------------|---------------------|---------------------|---|--|---------------------|---------------------|---------------------|---------------------|
|                     |                     |    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 17q23-q24            |                     |                     | •                   |   |  |                     |                     | ,                   | ;                   |
| S0144: 1, S0422: 1, | L0640: 1, L0770: 1, | 1, | Ļ | L0768: 1, L0803: 1, | L0774: 1, L0775: 1, | L0651: 1, L0655: 1, | L0661: 1, L0809: 1, | L5622: 1, L0663: 1, | H0144: 1, H0724: 1, | H0593: 1, H0690: 1, | H0684: 1, H0435: 1, | H0658: 1, H0670: 1, | H0648: 1, S0330: 1, | S0406: 1, H0447: 1, | S3012: 1, L0743: 1, | L0744: 1, L0751: 1, | L0777: 1, L0780: 1, | L0755: 1, L0759: 1, | H0665: 1 and H0543: 1. | L0771: 17, H0539: 6, | S0440: 3, L0805: 3, | L0776: 3, H0547: 3, | S0406: 3, L0779: 3, | H0012: 2, L0764: 2,                     | L0666: 2, L0663: 2,                    | H0689: 2, L0748: 2, | L0758: 2, H0686: 1, | S0442: 1, H0549: 1, | F0114: 1, H0052: 1, |
|                     |                     |    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Pro-29 to Ile-35,    | Gly-49 to Thr-90,   | Pro-113 to Val-123, | Glu-129 to Lys-146, | Glu-151 to Arg-163, H0012: 2, L0764: 2, | Leu-166 to Arg-179. L0666: 2, L0663: 2 | )                   |                     |                     |                     |
|                     |                     |    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2846                 |                     |                     |                     |   |  | •                   |                     |                     |                     |
|                     |                     |    |   |                     |                     | <del></del>         | -                   |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                        | 2 - 1042             | -                   |                     |                     |   |  |                     |                     |                     |                     |
|                     |                     |    |   |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                        | 671                  | ٠                   |                     |                     |   |  |                     |                     |                     |                     |
|                     |                     |    |   |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1039579              |                     |                     |                     |   |  |                     | •                   |                     |                     |
|                     |                     |    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HCYBI10              |                     |                     |                     |   |  |                     |                     |                     |                     |

| 170500,             | 176960,             | 182452,             | 230200,             | 249000,             | 253250              |                     |                     |                     |                     |                     |                        |                     |                       |                       |                     |                     |                     |                     | •                   |                     |                     |                     | ÷                   | :                   |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                      |                     |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0046: 1, H0687: 1, | L0369: 1, L0770: 1, | L0769: 1, L0772: 1, | L0800: 1, L0806: 1, | L0518: 1, L0809: 1, | L0788: 1, H0144: 1, | L0438: 1, H0660: 1, | H0666: 1, H0648: 1, | L0439: 1, L0747: 1, | L0750: 1, L0756: 1, | L0752: 1, L0759: 1, | S0434: 1 and S0436: 1. | H0402: 2, H0570: 1, | H0266: 1 and H0666: 1 | L0748: 28, L0758: 13, | L0769: 7, L0766: 7, | S0026: 7, L0749: 6, | H0266: 5, H0616: 4, | L0750: 4, L0362: 4, |                     | L0747: 3, H0686: 2, |                     | H0494: 2, L0646: 2, | H0659: 2, L0751: 2, | L0731: 2, L0759: 2, | L0588: 2, T0002: 1, | H0656: 1, H0484: 1, | H0661: 1, L0481: 1, | H0125: 1, S0045: 1, | H0351: 1, H0013: 1, |
|                     | •                   |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                        |                     |                       | Asp-10 to Gly-17,     | Asp-38 to Ser-44,   | Asn-70 to Thr-79,   | Gly-81 to Ser-91,   | Lys-94 to Ala-102,  | Asp-110 to Ile-116, | Asp-152 to Leu-157, | Pro-172 to Glu-177. |                     | -                   |                     |                     | •                   |                     |                     |                     |
|                     | ٠                   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                        | 2847                | -                     | 2848                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 643 - 999           |                       | 48 - 659              | -                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                        | 672                 |                       | 673                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1039652             |                       | 1039663               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |
|                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     | -                      | HMEFK29             |                       | HAOSK79               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|  | <u> </u>   |
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|  | 177070,<br>177070,<br>182500,<br>218000,<br>227220,<br>243500,<br>600839,<br>601800  |
|  | 15q15  |
| L0021: 1, L0471: 1,<br>H0267: 1, H0252: 1,<br>H0068: 1, H0038: 1,<br>H0087: 1, H0412: 1,<br>L0373: 1, L0772: 1,<br>L0806: 1, L0775: 1,<br>L0655: 1, L0677: 1,<br>H0657: 1,<br>H0648: 1, S0152: 1,<br>H0648: 1, S0152: 1,<br>H0521: 1, S3014: 1,<br>L0743: 1, L0777: 1,<br>L0756: 1, L0777: 1,<br>L0753: 1, L0777: 1,<br>H0445: 1, L0608: 1,<br>H0653: 1, H0136: 1, | Glu-31 to Pro-39, H0521: 23, S0360: 15, Thr-75 to Glu-80, H0046: 14, S0126: 13, Ala-131 to Gly-140, L0747: 12, H0551: 11, Ala-156 to Ala-165, H0318: 10, S0328: 9, Arg-184 to Phe-189, H0542: 9, H0580: 8, Asn-221 to Phe-228, H0486: 8, H0581: 8, Glu-239 to Glu-245, H0615: 8, S0440: 8, Ser-253 to Asp-261, H0660: 8, S0434: 8, Thr-267 to Thr-272, H0543: 8, L0664: 7, Thr-292 to Asp-297, H0556: 6, S0212: 6, Tyr-313 to Asn-325, H0494: 6, L0663: 6, Glu-385 to Leu-393, S0358: 5, S0476: 5, |
|  | Glu-31 to Pro-39, H0521: 23, S0360: Thr-75 to Glu-80, H0046: 14, S0126: J Ala-131 to Gly-140, L0747: 12, H0551: Ala-156 to Ala-165, H0318: 10, S0328: 9 Arg-184 to Phe-189, H0542: 9, H0580: 8 Asn-221 to Phe-228, H0486: 8, H0581: 8 Glu-239 to Glu-245, H0615: 8, S0440: 8, Ser-253 to Asp-261, H0660: 8, S0434: 8, Thr-267 to Thr-272, H0543: 8, L0664: 7, Thr-292 to Asp-297, H0556: 6, S0212: 6, Tyr-313 to Asn-325, H0494: 6, L0663: 6, Glu-385 to Leu-393, S0358: 5, S0476: 5,              |
|  | 2849   |
|  | 3 - 1649   |
|  | 674  |
|  | 1039689  |
|  | HPDRV42  |

|   |   |   |   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
|---|---|---|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Tyr-400 to Lys-410, H0013: 5, H0457: 5, Pro-413 to Gly-420, H0553: 5, H0673: 5, | Lys-454 to Leu-463, H0696: 5, S0406: 5, | Pro-501 to Gly-514, L0740: 5, L0731: 5, | Gln-535 to Leu-549. L0596: 5, H0585: 4, | H0661: 4, S0418: 4, | S0356: 4, S0408: 4, | H0575: 4, H0620: 4, | H0617: 4, L0764: 4, | L0666: 4, L0665: 4, | H0519: 4, S3014: 4, | S0027: 4, L0752: 4, | H0265: 3, H0713: 3, | H0657: 3, H0341: 3, | H0671: 3, H0638: 3, | 80420: 3, 80354: 3, | H0619: 3, H0411: 3, | H0370: 3, H0586: 3, | H0587: 3, H0597: 3, | L0471: 3, H0687: 3, | S0250: 3, S0003: 3, | S0142: 3, H0529: 3, | L0662: 3, L0766: 3, | L0651: 3, L0659: 3, | H0690: 3, S0152: 3, | H0436: 3, S0028: 3, | L0748: 3, L0750: 3, | L0779: 3, L0755: 3, | L0757: 3, H0445: 3, | S0011: 3, H0423: 3, |
|   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |   |   |   | _                   |                     |                     | _                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     | •                   |                     |                     |                     | -                   |                     |                     |                     |                     |                     | <b></b>             |                     |
|   |   | <del></del>                             |   |                     |                     |                     |                     |                     |                     |                     | ·                   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                      |                      |                     |                     |                     | <del>- , ·</del>    |                     |                     |                     | -                   |                      |                     |              |
| H0686: 2, T0049: 2, | S0134: 2, S0116: 2, | H0663: 2, H0662: 2, | S0444: 2, S0045: 2, | S0046: 2, S0132: 2, | S0278: 2, H0549: 2, | H0550: 2, H0497: 2, | H0156: 2, H0599: 2, | H0263: 2, H0544: 2, | H0012: 2, H0014: 2, | S0314: 2, H0428: 2, | H0039: 2, H0135: 2, | H0087: 2, H0623: 2, | H0059: 2, H0100: 2, | H0509: 2, S0150: 2, | H0641: 2, S0144: 2, | S0210: 2, S0002: 2, | .0763: 2, 1.4497: 2, | .0768: 2, L.0774: 2, | .0653: 2, L0654: 2, | .0527: 2, L0657: 2, | H0144: 2, S0374: 2, | H0691: 2, H0520: 2, | H0593: 2, H0689: 2, | H0435: 2, H0658: 2, | S0330: 2, S0378: 2, | S0380: 2, L0754: 2, | .0756: 2, L.0758: 2, | ,0591: 2, L0485: 2, | 2, S0026: 2, |
| 9890H               | S0134               | H0663               | S0444               | S0046               | 80278               | H0550               | H0156               | H0263               | H0012               | S0314               | H0036               | 1800H               | H0059               | H0506               | H0641               | S0210               | L0763                | F0768                | L0653               | 1.0527              | H014                | [690H]              | H0592               | H0435               | 80330               | 08608               | 10756                | [C020]              | L0599:       |
|                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     | _                   | -                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |              |
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| H0667: 2, S0192: 2, | H0422: 2, H0506: 2, | 0600: 2, H0171: 1, | [10002: 1, H0717: 1, | H0716: 1, H0295: 1, | H0650: 1, S0180: 1, | H0484: 1, H0483: 1, | H0306: 1, S0442: 1, | S0376: 1, H0675: 1, | 0410: 1, H0489: 1, | H0637: 1, S0007: 1, | H0645: 1, H0393: 1, | 0717: 1, S0222: 1, | 10392: 1, H0415: 1, | H0601: 1, H0600: 1, | H0574: 1, T0039: 1, | H0244: 1, H0427: 1, | S0280: 1, H0098: 1, | H0042: 1, T0082: 1, | H0036: 1, S0346: 1, | H0705: 1, H0505: 1, | H0309: 1, H0545: 1, | .0041: 1, H0015: 1, | H0373: 1, S0051: 1, | HOO71: 1, HO510: 1, | H0375: 1, S0318: 1, | S0022: 1, H0252: 1, | H0688: 1, H0644: 1, | H0628: 1, L0055: 1, | H0032: 1, H0169: 1, |
| Ξ.                  |                     | <u>a</u>           | <u> </u>             | <u> </u>            | <u>H</u>            | <u>H</u>            | <u> </u>            | S                   | <u>S</u>           | H                   | 工                   | <u>.</u>           | <u> </u>            | <u>H</u>            | H                   | <u>H</u>            | <u>S</u>            | <u> </u>            | H                   | <u>H</u>            | <u> </u>            | <u> </u>            | <u>工</u>            | 王                   | <u> </u>            | S                   | <u>H</u>            | H                   | H                   |
|                     |                     |                    |                      | ;                   |                     |                     |                     |                     |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |
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| 30366            | 6001             | 1061             | 1026             | 1041     | 70042              | 1056             | 1, S0450: | 1064             | 10538    | 1, L0598: 1 | L0770:   | L0637: | L0772:  | L0648:   | L0364:      | L0381: | L0661:   | L0635:    | L0783:   | L0789: 1          | l, S0428: | l, H0702: | 1054             | <b>HO68</b>      | 1064             | 1053             | <b>T052</b>      | 1055             | 1062               |
| : 1, S           | : 1, H           | : 1, I           | : 1, F           | : 1, I   | : 1, 1             | : 1, F           | : 1, S    | : 1, I           | : 1, E   | : 1, L      | : 1, I   |        | _î  | 7        |             | 7      |          | Ť         | : 1, I   | ^                 |           | : 1, I    | : 1, I           | ; 1, I           | . 1, I           | : 1, I           | ): 1, E          | : 1, E           | : 1, E             |
| H0124: 1, S0366: | S0036: 1, H0090: | H0634: 1, H0616: | F0067: 1, H0264: | 10488    | H0413: 1, T0042: 1 | .0475: 1, H0560: | S0294: 1  | H0633: 1, H0647: | S0344: ] | S0422: 1    | .0371: 1 | .0638: | 3904:   | .0646:   | .0767: ]    | .0649: | 0655: 1  | 4669:     | 0526: 1, | .0647: 1          | 4559: ]   | :10697:   | H0703: 1, H0547: | 10682: 1, H0683: | H0670: 1, H0648: | H0672: 1, H0539: | H0710: 1, H0522: | S0404: 1, H0555: | S0392: 1, H0626: 1 |
| H                | S                | <u> </u>         | <u> </u>         | <u> </u> | 프                  | <u> </u>         |           | 王                | S        | S           | <u></u>  | ᆜ      | <u>, , , , , , , , , , , , , , , , , , , </u> | <u> </u> | <u> </u>    | 닏      | <u> </u> | <u>_}</u> | <u> </u> | ᆜ                 | ᆸ         | <u> </u>  | 프                | H                | 正                | Ŧ                | 王                | S                | S                  |
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| H0627: 1, L0612: 1, | S0206: 1, L0743: 1, | L0439: 1, L0751: 1, | L0753: 1, L0759: 1, | S0260: 1, H0444: 1, | L0608: 1, L0593: 1, | H0668: 1, H0665: 1, | S0242: 1, S0194: 1, | S0196: 1, S0424: 1, | H0008: 1, H0352: 1 and | H0712: 1. | L0662: 7, H0013: 5, | L0766: 5, L0803: 4, | L0655: 4, L0665: 4, | L0740: 4, L0731: 4, | H0677: 4, T0042: 3, | L0776: 3, L0809: 3, | H0519: 3, L0750: 3, | L0759: 3, H0543: 3, | H0170: 2, L0470: 2,                     | H0341: 2, S0360: 2, | H0266: 2, H0551: 2,                  | L0351: 2, H0529: 2, | L0646: 2, L0521: 2, |                     | L0663: 2            | H0547: 2,                            | L0602: 2, H0518: 2, | H0522: 2, S0406: 2, | L0748: 2, L0747: 2, |
|                     |                     |                     |                     |                     |                     | 1                   |                     |                     | -                      |           | Ser-1 to Pro-16,    | Asn-40 to Gly-46,   | Pro-48 to Arg-53,   | Lys-64 to Pro-72,   | Val-87 to Asp-93,   | Asp-109 to Tyr-118, | Glu-157 to Pro-172, | Pro-178 to Gly-188, | Glu-252 to Leu-263, H0170: 2, L0470: 2, | Thr-266 to Leu-273, | Glu-296 to Ala-310, H0266: 2, H0551: | Glu-312 to Gln-318, | Glu-324 to Asn-340, | Glu-344 to Gly-373, | Glu-383 to Asn-395, | Val-399 to Glu-414. H0547: 2, H0659: |                     |                     |                     |
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| L0591: 2, H0542: 2<br>H0506: 2, H0171: 1<br>H0265: 1, T0002: 1<br>H0713: 1, H0125: 1 | 20418: 1, 30338: 1<br>T0008: 1, H0351: 1<br>S0222: 1, H0431: 1<br>H0415: 1, H0586: 1<br>H0427: 1, S0280: 1 | L0021: 1, 70282: 1<br>S0010: 1, H0581: 1<br>H0566: 1, L0471: 1<br>H0620: 1, H0024: | H0014: 1, H0687:<br>S0250: 1, H0328: 1<br>H0428: 1, H0039:<br>H0553: 1, H0090: | H0591: 1, H0616: 1<br>H0379: 1, H0056: 1<br>T0041: 1, H0494: 1<br>L0475: 1, S0014: 1<br>H0560: 1, L0065: 1 |   | : 1, L0805: |
| L0591:<br>H0506<br>H0265<br>H0713  | 30418:<br>T0008:<br>S0222:<br>H0415  | 10721<br>10021<br>80010:<br>H0566<br>H0620   | H0014<br>S0250:<br>H0428<br>H0553  | H0591<br>H0379<br>T0041:<br>L0475<br>H0560   | 20446: 1, 1<br>H0641: 1, 1<br>L0369: 1, 1<br>L0763: 1, 1<br>L0638: 1, 1<br>L0373: 1, 1<br>L0794: 1, 1 | L0774:      |
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| L0527: 1, L0658: 1, |   | L0791: 1, L4501: 1, | L0666: 1, S0374: 1, | L0565: 1, H0723: 1, | S0126: 1, H0684: 1, | H0435: 1, H0651: 1, | S0330: 1, S0378: 1, | S0152: 1, H0521: 1, | S0044: 1, H0555: 1, | H0631: 1, L0749: 1, | L0756: 1, L0786: 1, | <br>ئ_ ` | L0588: 1, L0605: 1, | L0608: 1, L0595: 1 and | H0653: 1. | AR096: 1, AR089: 1, | AR055: 1, AR053: 1, | AR033: 1, AR061: 1, | _                 | AR039: 0, AR052: 0  | L0766: 16, S0440: 7, | L0646: 7, H0547: 6, | H0659: 5, L0749: 5, | L0759: 5, H0650: 4, | S0410: 4, S0422: 4, | S0374: 4, H0341: 3, | H0032: 3, H0040: 3, | H0529: 3, L0804: 3, |
|                     | • |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |          |                     |                        |           | Tyr-11 to Val-16,   | Glu-37 to Arg-42,   | Asn-50 to Arg-58,   | Leu-82 to Leu-96, | Glu-112 to Gln-120. |                      |                     |                     |                     |                     |                     |                     |                     |
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|                     |   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |          |                     |                        |           | 1039748             |                     |                     |                   |                     |                      |                     |                     |                     |                     |                     |                     |                     |
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| H0520: 3, H0435: 3,<br>H0658: 3. H0521: 3. | S0406: 3, L0748: 3, | H0423: 3, S0424: 3, | H0170: 2, H0657: 2, | S0418: 2, S0280: 2, | H0266: 2, H0598: 2, | H0090: 2, H0616: 2, | L0763: 2, L0803: 2, | L0666: 2, L0663: 2, | H0660: 2, H0672: 2, | L0756: 2, L0757: 2, | S0026: 2, H0556: 1, | H0686: 1, H0656: 1, | S0001: 1, H0662: 1, | S0420: 1, S0358: 1, | S0376: 1, S0444: 1, | H0728: 1, S0045: 1, | L0717: 1, H0574: 1, | H0486: 1, H0318: 1, | H0596: 1, T0110: 1, | L0471: 1, H0024: 1, | H0014: 1, H0083: 1, | H0510: 1, S0250: 1, | S0003: 1, H0428: 1, | H0591: 1, H0634: 1, | H0551: 1, H0560: 1, | H0625: 1, H0641: 1, | H0647: 1, L0520: 1, | L0769: 1, L0761: 1, |
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|   |  | 124200,<br>147440,<br>160781,<br>217300,<br>235800,   |
|   |  | 12q21-q23   |
| L0764: 1, L0521: 1,<br>L0375: 1, L0805: 1,<br>L0375: 1, L0805: 1,<br>L0606: 1, L0659: 1,<br>L0606: 1, L0699: 1,<br>L035: 1, L0809: 1,<br>L0367: 1, L0789: 1,<br>H0668: 1, H0519: 1,<br>H0668: 1, H0710: 1,<br>H0704: 1, H0134: 1,<br>H0755: 1, L0779: 1,<br>L0777: 1, L0758: 1,<br>S0436: 1, H0667: 1,<br>S0436: 1, H0667: 1,<br>S0196: 1, H0542: 1 and<br>H0543: 1, H0542: 1 and | S0420: 1, H0600: 1,<br>H0587: 1, H0013: 1,<br>H0428: 1, H0644: 1,<br>H0063: 1, H0386: 1 and<br>L0747: 1. | H0521: 9, L0439: 9,<br>L0747: 8, L0655: 6,<br>L0748: 6, S0212: 5,<br>S6028: 4, L0483: 4,<br>L0794: 4, L0766: 4, |
|   | Gln-16 to Ser-24.  |   |
|   | 2852   | 2853  |
|   | 1 - 603  | 411 - 2372  |
|   | <i>LL</i> 9  | 879   |
|   | 1039871  | 1039891   |
|   | нтнрт76  | HSYEC21   |

| 600175,            | 808009  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                  |                     |                     |                  |                  |                  | ·                   |                    |                    |                    |                  |                  |                  |                    |                  |
|--------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|---------------------|---------------------|------------------|------------------|------------------|---------------------|--------------------|--------------------|--------------------|------------------|------------------|------------------|--------------------|------------------|
| 3,                 | ·,  | 3,                  | 3,                  | 2,                  | 2,                  | ,2                  | .,                  | 2,                  | 2,                  | . 2,                | 2,                  | 2,                  | .,                  | .,                  | 1,               | 1,                  | ,                   | 1,               | 1,               | 1,               | 1,                  | 1,                 | 1,<br>—            | 1,                 | 1,               | 1,               | 1,               | 1,                 | 1,               |
| H0040: 3, H0634: 3 | S0386: 3, L0800: 3,                           | L0662: 3, L0665: 3, | L0438: 3, S0028: 3, | L0740: 3, H0318: 2, | H0544: 2, S0051: 2, | H0615: 2, H0163: 2, | H0494: 2, L0645: 2, | L0649: 2, L0803: 2, | L0804: 2, L0659: 2, | H0547: 2, H0689: 2, | S0380: 2, H0522: 2, | L0743: 2, L0744: 2, | L0749: 2, L0596: 2, | L0366: 2, S0242: 2, | S0114: 1, H0583: | H0650: 1, H0656: 1, | H0341: 1, S0001: 1, | H0483: 1, H0402: | H0638: 1, S0356: | S0354: 1, S0358: | S0408: 1, H0580: 1, | L0103: 1, S0045: 1 | H0640: 1, H0586: 1 | H0360: 1, H0643: 1 | H0486: 1, H0013: | H0036: 1, H0263: | H0546: 1, H0012: | S0050: 1, S0388: 1 | H0399: 1, H0510: |
|                    | <u>, , , , , , , , , , , , , , , , , , , </u> |                     |                     | <u> </u>            |                     | <u> </u>            | H                   |                     |                     |                     | <u> </u>            |                     |                     | =1                  | <u> </u>         | <u> </u>            |                     |                  |                  | <u> </u>         |                     |                    |                    |                    |                  | <b>, p=q</b> .   | <u></u>          | ,                  | 1                |
|                    |   |                     |                     |                     |                     |                     | ·                   |                     |                     | •                   |                     |                     |                     | <u> </u>            | -                |                     |                     |                  |                  |                  |                     |                    |                    |                    |                  |                  |                  |                    |                  |
| ,                  |   | <u>.</u>            | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                     |                  |                  |                  |                     |                    |                    |                    |                  |                  |                  |                    |                  |
|                    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                     |                  |                  |                  |                     |                    |                    |                    | -                |                  |                  | <u>.</u>           |                  |
|                    |   |                     |                     |                     | *                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                     |                  |                  |                  |                     |                    |                    | _                  |                  |                  |                  |                    |                  |

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|  |  |   | m <sup>2</sup>   |
| 87: 1, [4: 1, 06: 1, 06: 1, 12: 1, 12: 1, 44: 1, 26 | /8: 1,<br>14: 1,<br>56: 1,<br>80: 1,<br>59: 1,   |   | L0766: 12, L0759: 8, 0171: 6, L0754: 6, 0731: 6, H0624: 5, 0584: 5, H0031: 5, 0422: 5, L0663: 5, 0547: 5, H0686: 4, 0276: 5, H0686: 4, 0474: 4, L0662: 4,                          |
| 1, H0687: 1, S0214: 1 1, T0006: 1 1, H0511: 1, H0641: 1, S0426: 1 1, L0657: 1 1, L0545: 1 1, L0545: 1 1, H0519:  | 1, S03/8:<br>1, S3014:<br>1, L0756:<br>1, L0780:<br>1, L0759:<br>1 and S007  |   | 6, L07<br>6, H06<br>6, H06<br>5, H06<br>5, L06<br>7, L06<br>4, L06   |
| H0271: 1, H0687: 1<br>S0003: 1, S0214: 1,<br>H0428: 1, T0006: 1<br>H0591: 1, H0551: 1<br>T0067: 1, H0641: 1<br>S0210: 1, S0426: 1,<br>L0606: 1, L0657: 1<br>L0518: 1, L0545: 1<br>H0144: 1, H0519: 1   | 50126: 1, 50378: 1,<br>H0436: 1, S3014: 1,<br>L0750: 1, L0756: 1,<br>L0779: 1, L0780: 1,<br>L0758: 1, L0759: 1,<br>H0668: 1 and S0026: |   | L0766: 12, L0759:<br>H0171: 6, L0754: 6,<br>L0731: 6, H0624: 5,<br>H0584: 5, H0031: 5,<br>S0422: 5, L0663: 5,<br>H0547: 5, L0756: 5,<br>S0276: 5, H0686: 4,<br>S0474: 4, L0662: 4, |
| <u> </u>   | <u> </u>   | 58,<br>79,<br>32,<br>-118,<br>-149,   |  |
| •  |  | o Phe-<br>o Phe-<br>Val-10<br>to Thr<br>to Asp<br>to Lys  |  |
|  | ·  | Glu-53 to Phe-58,<br>Arg-70 to Phe-79,<br>Ile-94 to Val-102,<br>Thr-106 to Thr-118,<br>Glu-139 to Asp-149,<br>Asp-183 to Lys-215. |  |
|  |  | 2854  | 2855   |
|  |  | 3 - 719   | 273 - 425  |
|  | ·  | <u>e</u>  | 273  |
|  |  | 619   | 089  |
| ·  |  | 1040384   | 1040385  |
|  |  | 104   | 104(   |
|  |  | 2025  | HNOJN70  |
|  |  | HKGC025   | HNO  |

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|                   |                    |                    |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | -                   |                    |                     |                    | •                   |                     |                     | <u></u>             |                     |                     |                      | <u> </u>           |                    |                    |                    |                     |                    |
| _                 | · ~^               | <u>.</u>           |                     |                     |                     | ~                   | <u>~</u>            | 2,                  | 2,                  |                     | ~~                  | ~                   | ~í                  | <br>               |                     | 2,                 | ~î                  | ~î                  | ~                   | ~;                  | ~·                  | <u>~</u>            | <u>~</u>             |                    | 1,                 | 1,                 |                    | •                   | •                  |
| 0777: 4. L0758: 4 | H0170: 3, L0717: 3 | H0457: 3, H0090: 3 | .0770: 3, L0794: 3, | .0650: 3, L0805: 3, | ,0655: 3, L0659: 3, | .0666: 3, H0520: 3, | H0543: 3, S0412: 3, | H0657: 2, H0341: 2, | H0306: 2, H0402: 2, | S0358: 2, S0360: 2, | H0574: 2, T0060: 2, | H0318: 2, L0163: 2, | H0328: 2, L0483: 2, | H0591: 2, L0637: 2 | .0646: 2, L0771: 2, | .0521: 2, L0649: 2 | J0803: 2, L0657: 2, | .0656: 2, L0517: 2, | .0789: 2, H0539: 2, | H0521: 2, L0742: 2, | .0439: 2, L0751: 2, | .0747: 2, L0752: 2, | .0592: 2, L.0599: 2, | .0594: 2, L0362: 2 | H0556: 1, H0167: 1 | H0685: 1, H0344: 1 | H0650: 1, S0116: 1 | S0418: 1, S0420: 1, | S0356: 1, S0376: 1 |
| 071               | H                  | HC                 | <u>3</u>            | <u>3</u>            | <u>3</u>            | 3                   | H                   | H                   | H                   | 0S                  | H                   | H                   | H                   | H                  | <u>21</u>           | 3                  | <u>3</u>            | <u>27</u>           | <u>3</u><br>:       | H                   | 21                  | 3                   | <u> </u>             | 3                  | H                  | H                  | Ħ                  | OS                  | OS                 |
| <br>              |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                    |                     |                     |                     | _                   |                     |                     |                      |                    |                    |                    |                    |                     |                    |
|                   |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                    |                     |                     |                     |                     |                     |                     |                      |                    |                    |                    |                    |                     |                    |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0580: 1, S0045: 1, | S0046: 1, S6026: 1, | H0351: 1, S0222: 1, | H0438: 1, H0486: 1, | H0427: 1, L0021: 1, | H0097: 1, H0004: 1, | H0581: 1, L0041: 1, | H0050: 1, L0471: 1, | H0023: 1, H0057: 1, | H0015: 1, H0051: 1, | H0266: 1, S0336: 1, | H0687: 1, S0003: 1, | S0214: 1, H0622: 1, | H0674: 1, H0040: 1, | H0616: 1, H0413: 1, | T0069: 1, H0100: 1, | H0494: 1, H0561: 1, | L0065: 1, H0509: 1, | H0646: 1, L0598: 1, | L0763: 1, L0769: 1, | L0638: 1, L0796: 1, | L0761: 1, L0641: 1, | L0643: 1, L0549: 1, | L0498: 1, L0375: 1, | L0776: 1, L0527: 1, | L0526: 1, L0518: 1, | L0783: 1, L0809: 1, | L0664: 1, H0144: 1, | S0374: 1, T0068: 1, | L0438: 1, L0352: 1, |
|                     |                     |                     |                     | e                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | ,                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |                     |                     |                     |                     |                     |                     |
|                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| 1,<br>1,<br>1,<br>1,<br>1,<br>1,<br>1,   | %  |
| H0519: 1, H0593: 1,<br>H0682: 1, H0658: 1,<br>S0328: 1, H0518: 1,<br>H0694: 1, H0626: 1,<br>S0028: 1, L0743: 1,<br>L0740: 1, L0745: 1,<br>L0750: 1, L0780: 1,<br>H0445: 1, L0588: 1,<br>L0593: 1, L0595: 1,<br>S0026: 1, H0423: 1 and<br>S0424: 1. | L0439: 13, L0438: 8,<br>L0731: 7, L0756: 6,<br>L0803: 4, L0754: 4,<br>L0750: 4, S0358: 3,<br>H0716: 2, H0427: 2,<br>L0766: 2, L0659: 2,<br>L0783: 2, H0435: 2,<br>H0660: 2, L0755: 2,<br>L0758: 2, S0436: 2,<br>S0342: 1, H0650: 1,<br>H0632: 1, L0021: 1,<br>F0082: 1, H0051: 1,<br>S6028: 1, H0051: 1,<br>S6028: 1, H0051: 1,<br>L0770: 1, L0794: 1,<br>L0770: 1, L0794: 1,<br>L0804: 1, L0805: 1, |
| H0682:<br>S0328: 1<br>H0694:<br>S0028: 1<br>L0740: 1<br>L0750: 1<br>H0445:<br>L0593: 1<br>S0026: 1<br>S0026: 1   | <u> </u>   |
|  | Ser-23 to Ser-34,<br>Lys-48 to Glu-53,<br>Cys-78 to Asn-88,<br>Ala-108 to Asp-113,<br>Glu-124 to Pro-131.  |
|  | 2856   |
|  | 440 - 832  |
|  | 681  |
|  | 1040388  |
|  | HADFS31  |

|  | 104311,<br>109150,<br>182600,<br>245200,<br>601208   |
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|  | 14q24.1-<br>q24.3  |
| L0789: 1, L0666: 1,<br>L0663: 1, H0690: 1,<br>H0659: 1, H0670: 1,<br>S0328: 1, S0028: 1,<br>L0747: 1 and L0752: 1. | L0439: 5, L0749: 5,<br>L0770: 4, L0764: 4,<br>L0738: 4, S0126: 4,<br>L0758: 4, S0358: 3,<br>L0778: 3, L0774: 3,<br>L0783: 3, L0774: 3,<br>L0783: 3, L0774: 3,<br>L0755: 3, L0752: 3,<br>L0755: 3, L0731: 3,<br>L0592: 3, S0026: 3,<br>H0656: 2, S0360: 2,<br>R0109: 2, L0664: 2,<br>L0775: 2, L0518: 2,<br>L0775: 2, L064: 2,<br>L0775: 2, L064: 2,<br>L0775: 1, H0686: 1,<br>S0116: 1, S0420: 1,<br>S0408: 1, T0112: 1,<br>H0156: 1, H0575: 1,<br>H0572: 1, H0123: 1,<br>H0572: 1, H0123: 1,<br>H0572: 1, H0123: 1, |
|  | Gly-11 to Pro-17, Ser-61 to Gly-68, Val-103 to Leu-108, His-157 to Pro-162, Glu-197 to Pro-203, Gly-207 to Thr-213.  |
|  | 2857   |
|  | 1418 - 726   |
|  | 682  |
|  | 1040569  |
|  | HJBDC89  |

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|-------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|-------------------|----|-----------|----|---|---------------------|---------------------|---------------------|---------------------|---------------------|
| S0003: 1 H0424: 1 | 30003. 1, 110727. 1, | H0031: 1, H0553: 1, | H0165: 1, H0673: 1, | H0708: 1, S0036: 1, | H0040: 1, T0067: 1, | H0488: 1, H0412: 1, | S0039: 1, H0494: 1, | H0509: 1, H0132: 1, | S0144: 1, H0538: 1, | H0529: 1, L0520: 1, | L0800: 1, L0773: 1, | L0794: 1, L0803: 1, | L0804: 1, L0659: 1, | L0528: 1, S0374: 1, | S0148: 1, H0682: 1, | H0696: 1, S0044: 1, | L0748: 1, L0751: 1, | L0745: 1, L0757: 1, | H0445: 1, S0276: 1 and | S0196: 1. |                   |    | 7, AR061: |    |   | L0662: 2, L0804: 2, | L0748: 2, L0439: 2, | L0779: 2, S0360: 1, | H0635: 1, H0457: 1, | H0179: 1, L0763: 1, |
|                   |                      |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Lys-34 to His-39. |    |           |    |   |                     |                     |                     |                     |                     |
|                   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2858              |    |           |    |   |                     |                     |                     |                     |                     |
|                   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 129 - 557         |    |           |    |   |                     |                     |                     | ·                   |                     |
|                   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 683               |    |           |    |   |                     |                     |                     | 1                   |                     |
|                   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   | •                   | •                   |                     |                     |                     |                     |                     | •                      |           | 1040591           |    |           |    |   |                     |                     |                     |                     |                     |
|                   |                      |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ····                |                     |                     |                        |           | HTAIX75           |    |           |    |   |                     |                     |                     |                     |                     |

|  |   |   | 108985,<br>186921,<br>602092   |
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|  | ,<br>,  |   | 11p15  |
| L0646: 1, L0645: 1,<br>L0766: 1, L0659: 1 and<br>H0658: 1. | H0373: 2, H0328: 2,<br>H0428: 2, L0769: 2,<br>L0439: 2, T0002: 1,<br>S0376: 1, H0489: 1,<br>S0278: 1, H0550: 1,<br>H0253: 1, H0131: 1,<br>L0764: 1, L0766: 1,<br>L0352: 1, S0126: 1,<br>S0380: 1, L0740: 1,<br>L0747: 1, L0752: 1,<br>L0592: 1, L0595: 1 and<br>H0542: 1. | H0264: 1, L0766: 1,<br>H0660: 1 and H0539: 1. | L0749: 7, S0026: 6,<br>H0616: 4, L0766: 4,<br>L0803: 4, L0665: 4,<br>L0748: 4, L0740: 4,<br>H0624: 3, H0170: 3,<br>H0657: 3, S0358: 3,<br>S0003: 3, L0455: 3,<br>L0498: 3, L0809: 3,<br>L0666: 3, H0659: 3,<br>H0423: 3, S0442: 2,<br>H0083: 2, H0038: 2,<br>L0500: 2, L0764: 2, |
|  |   |   |  |
|  | 2859  | 2860  | 2861   |
|  | 3 - 413   | 29 - 92                                       | 2 - 922  |
|  | 684   | 685   | 989  |
|  | 1040620   | 1040631                                       | 1040694  |
|  | HODBO29   | HOCOF27                                       | HSPSE88  |

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|                     |                     |                      |                     |                     |                       |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |                  |                  |                 |  |                  |          |
|                     |                     |                      |                     |                     |                       |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    | •                |                  |                 |  |                  |          |
|                     |                     |                      |                     |                     |                       |                     | <u>.                                    </u> |                  |                  |       |                     |                  |                  |                  |                  |                  |                  | _                |                  |                  |                    |                  |                    |                  |                  |                 |  |                  |          |
| 2,                  | <b>~</b> ,          | ų                    | ري<br>د             | .,                  | ري<br>ر               | ų,                  | 1,   | <b>–</b>         | 1,               | 1,    | <b>,</b>            | <u></u>          | T,               | Į,               | 1,               | 1,               | 1,               | Τ,               | <del>_</del> ,   | T,               | 1,                 | I,               | 1,                 | 1,               | <u></u>          | <b>T</b> ,      | <u>,                                    </u> | 1,               | 1,       |
| .0499: 2, L0804: 2, | .0775: 2, L0806: 2, | .0509: 2, L.0607: 2, | .0657: 2, L0493: 2, | .0513: 2, H0690: 2, | .0602: 2, L0777: 2, " | .0752: 2, L0759: 2, | .0600: 2, H0171:                             | H0713: 1, H0716: | ,0002: 1, H0650: | 001:  | H0638: 1, S0444: 1, | S0408: 1, S0222: | H0486: 1, H0156: | .0021: 1, H0042: | 10253: 1, H0263: | H0544: 1, H0545: | H0271: 1, S0336: | S0022: 1, S0214: | 40328: 1, H0615: | H0428: 1, L0483: | H0673: 1, H0124: 1 | S0036: 1, H0090: | H0040: 1, H0063: 1 | H0551: 1, T0067: | 70041: 1, H0647: | 0520: 1, L0761: | .0800: 1, L0374:                             | .0662: 1, L0768: | 533:     |
| , LO                | S<br>S              | Š                    | Ž,                  | 2, HO               | 2, LO                 | 2, 10               | 2, HO  | I, H0            | l, H0            | 1, 80 | 1, 50               | , SO.            | 1, H0            | l, H0            | 1, HO            | 1, HO            | 1, S0            | , SO             | 1, HO            | 1,13             | 1, HO              | , H0             | 1, HO              | 1, TO            | l, HO            |                 | 2,   | 1, 1.0           | l, L0533 |
| 99: 2               | 75: 2               | 60.7                 | 57:2                | 13:2                | 02:2                  | 52:2                | 00:2   | 713:             | 02: 1            | .141: | 538:                | 08: 1            | :981             | 21: 1            | 253:             | 4.               | 271:             | 22: 1            | 328:             | 128:             | 573:               | 36: 1            | 64                 | 551:             | 41:1             | 20: 1           |  | 62: ]            | 0381: 1  |
| 107                 | <u>[</u>            | 5                    | 100                 | <u> 1</u> 05        | 200                   | <u> 10</u>          | 9  | HO               | 9                | H03   | HOH                 | S04              | <u>й</u>         | 2                | H02              | HOH              | H0.              | <u>800</u>       | HOH              | 7<br>H<br>0<br>H | HOH                | 200              | )<br>H             | <u>H</u>         | <u>10</u>        | 5               | <u> </u>                                     | <u>ğ</u>         | <u>8</u> |
|                     |                     |                      |                     |                     |                       |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |                  |                  |                 |  |                  |          |
|                     |                     |                      |                     |                     |                       |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |                  |                  |                 |  |                  |          |
|                     |                     |                      |                     | ٠                   |                       |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |                  |                  |                 |  |                  |          |
|                     |                     |                      |                     |                     |                       |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |                  | •                |                 |  |                  |          |
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| ļ                   |                     |                      |                     |                     |                       |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |                  |                  |                 |  |                  |          |
|                     |                     |                      |                     |                     |                       |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |                  |                  |                 |  |                  |          |
|                     |                     |                      |                     |                     |                       |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |                  |                  |                 |  |                  |          |
| -                   |                     |                      |                     |                     | _                     |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |                  |                  |                 |  |                  |          |
|                     |                     |                      |                     |                     |                       |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    | <u>.</u>         |                    |                  |                  |                 |  |                  |          |
|                     |                     |                      |                     |                     |                       |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |                  |                  |                 |  |                  | ,        |
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|                     |                     |                      |                     |                     |                       |                     |  |                  |                  |       |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                    |                  |                  |                 |  |                  |          |
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|---|---|---|
| L0651: 1, L0805: 1,<br>L0653: 1, L0776: 1,<br>L0655: 1, L0512: 1,<br>L0659: 1, L0547: 1,<br>L0783: 1, L0383: 1,<br>L0663: 1, S0374: 1,<br>L0352: 1, H0647: 1,<br>H0693: 1, H0684: 1,<br>H0696: 1, S0146: 1,<br>H0187: 1, H0478: 1,<br>S3012: 1, L0786: 1,<br>L0757: 1, S0434: 1,<br>L0592: 1, L0485: 1,<br>L0599: 1, L0608: 1,<br>L0594: 1, S0276: 1,<br>S0460: 1 and H0506: 1. | H0556: 2, H0650: 1,<br>S0376: 1, S0474: 1,<br>H0038: 1, H0529: 1,<br>H0683: 1, S3014: 1,<br>S0206: 1, L0740: 1 and<br>L0591: 1. | S0358: 8, S0010; 5,<br>S3014: 5, S0126: 4,<br>H0333: 3, T0067: 3,<br>H0547: 3, L0747: 3,<br>S0045: 2, H0486: 2,<br>H0599: 2, S0346: 2,<br>L0471: 2, H0428: 2, |
|   | Pro-19 to Asn-26,<br>His-58 to Pro-63.  | Ala-1 to Gly-21,<br>Pro-28 to Gln-35.   |
|   | 2862  | 2863  |
|   | 1 - 354   | 352 - 753   |
|   | 289   | 889   |
|   | 1040826   | 1040913   |
|   | HSKXM78   | HNLMB92   |

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|                     |                     |                     |                     |                     |                     |                         |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | i                      |                        |
| H0616: 2, H0658: 2, | S0028: 2, L0742: 2, | H0170: 1, S0116: 1, | H0449: 1, S0418: 1, | S6026: 1, H0550: 1, | S0222: 1, H0438: 1, | <br>H0156: 1, T0082: 1, | Ŧ, | H0530: 1, H0150: 1, | H0023: 1, H0266: 1, | H0687: 1, H0615: 1, | T0006: 1, H0031: 1, | H0068: 1, H0551: 1, | H0100: 1, T0041: 1, | S0150: 1, H0652: 1, | S0144: 1, H0529: 1, | L0543: 1, H0144: 1, | S0374: 1, H0691: 1, | H0520: 1, H0689: 1, | H0684: 1, H0670: 1, | H0660: 1, H0672: 1, | H0539: 1, S3012: 1, | S0027: 1, L0744: 1, | L0754: 1, L0749: 1, | L0750: 1, L0752: 1, | L0755: 1, L0731: 1, | L0757: 1 and S0194: 1. | H0619: 1, H0013: 1,    | L0794: 1 and L0788: 1. |
|                     |                     |                     |                     |                     |                     |                         |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2864 Pro-18 to Asp-25. |                        |
|                     |                     |                     |                     |                     | _                   |                         | _  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2864                   |                        |
|                     |                     |                     |                     |                     |                     |                         |    | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 577 - 149              |                        |
|                     |                     |                     |                     |                     |                     |                         |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 689                    |                        |
|                     | ٠                   | <i>:</i>            |                     |                     |                     |                         |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1040925                |                        |
|                     |                     |                     |                     |                     |                     |                         |    |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HE8ON57                |                        |

| 164731,             | 172400,             | 172400,             | 180901,             | 180901,             | 221770,             | 248600,             | 600918,             | 602716              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| 19q13.1             | i                   |                     |                     |                     |                     |                     |                     | •                   |                     | ·<br>—              |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0556: 8, L0758: 7, | L0593: 7, H0542: 7, | L0601: 6, L0747: 5, | H0618: 4, H0620: 4, | H0617: 4, H0494: 4, | L0439: 4, L0751: 4, | S0420: 3, S0046: 3, | H0622: 3, H0087: 3, | L0766: 3, H0690: 3, | H0670: 3, S0328: 3, | L0748: 3, L0754: 3, | L0731: 3, H0543: 3, | H0265: 2, H0650: 2, | H0484: 2, H0255: 2, | S0418: 2, H0549: 2, | H0333: 2, H0024: 2, | H0551: 2, S0150: 2, | L0764: 2, L0662: 2, | L0375: 2, L0663: 2, | L0665: 2, H0660: 2, | H0521: 2, S0146: 2, | L0741: 2, L0779: 2, | L0361: 2, L0603: 2, | H0422: 2, H0170: 1, | S0040: 1, H0295: 1, | H0294: 1, H0657: 1, | H0656: 1, H0341: 1, | S0212: 1, H0661: 1, | S0442: 1, S0354: 1, | S0360: 1, L0717: 1, |
| Leu-32 to Lys-43,   | Phe-92 to Arg-98,   | Glu-118 to Thr-136, | Pro-173 to Tyr-178, | Pro-215 to Asn-222, | Leu-230 to Asn-235. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     | •                   |                     |                     | , .                 |                     |
| 2865                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| 494 - 1384          |                     |                     |                     |                     |                     |                     | ,                   | ,                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |
| 069                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |
| 1040932             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HOCOC14             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| S0278: 1, H0437: 1, | • | H0592: 1, H0497: 1, | H0486: 1, H0101: 1, | H0013: 1, H0575: 1, | <br>H0052: 1, H0251: 1, | H0309: 1, H0204: 1, | H0545: 1, H0041: 1, | • | H0014: 1, H0083: 1, | H0354: 1, H0266: 1, | H0687: 1, H0292: 1, | H0284: 1, H0039: 1, | H0553: 1, H0606: 1, | H0166: 1, H0068: 1, | H0135: 1, H0040: 1, | H0268: 1, H0412: 1, | S0038: 1, H0100: 1, | T0041: 1, H0280: 1, | H0429: 1, H0561: 1, | S0440: 1, H0641: 1, | S0144: 1, S0210: 1, | S0002: 1, L0640: 1, | L0770: 1, L0769: 1, | L0637: 1, L0761: 1, | L0642: 1, L0771: 1, | L0648: 1, L0774: 1, | L0655: 1, L0629: 1, | L0658: 1, L0809: 1, |
|                     |   |                     |                     |                     |                         |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |   |                     |                     |                     |                         |                     |                     |   | 7.0                 |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |   |                     |                     |                     | <br>                    |                     |                     |   |                     | · .                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |   |                     |                     | <u>.</u>            |                         |                     |                     | _ |                     |                     | -                   |                     | · · · · <u>·</u>    |                     | -                   |                     | -                   | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |   |                     |                     |                     |                         | `                   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                                      |  |                     |                        |                   |                   |                   |                     |                     |                     |                        |                    |                     | 300047,                       |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                                      |  |                     |                        |                   |                   |                   |                     |                     |                     |                        |                    |                     | Xp11.23                       |
| L0789: 1, L0790: 1,<br>L0666: 1, L0664: 1, | H0547: 1, H0593: 1, | 50330: 1, H0539: 1, | S0152: 1, H0522: 1, | H0134: 1, S0406: 1, | H0555: 1, H0627: 1, | L0743: 1, L0750: 1, | L0756: 1, L0752: 1, | L0757: 1, S0434: 1, | S0436: 1, S0276: 1, | H0423: 1 and S0424: 1. | H0265: 2, H0556: 1, | S0418: 1, S0376: 1, | T0060: 1, S0280: 1, | H0615: 1, H0628: 1,                  | H0059: 1, H0100: 1,                    | L0438: 1, S0126: 1, | H0435: 1 and H0660: 1. | H0415: 2          |                   |                   | H0052: 3, H0617: 3, | H0135: 3, H0012: 2, | H0253: 1, S0210: 1, | L0659: 1 and L0779: 1. | •                  |                     | L0666: 16, L0751: 15, Xp11.23 |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                      | Pro-6 to Gly-12,    | Ala-30 to Arg-35,   | Arg-90 to Thr-102,  | Phe-112 to Asp-120, H0615: 1, H0628: | Asn-157 to Thr-163 H0059: 1, H0100: 1, |                     |                        | Asp-22 to Val-42, | Phe-50 to Tyr-55, | Leu-65 to Gln-70. | Glu-20 to Ser-27,   | Ala-49 to Pro-55,   | Phe-66 to Asp-71,   | Ala-77 to Val-83,      | Pro-85 to Tyr-103, | Pro-135 to Ala-142. | Pro-5 to Ser-12,              |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2866                |                     |                     |                                      |  |                     |                        | 2867              |                   |                   | 2868                |                     |                     |                        |                    |                     | 2869                          |
|  | -                   |                     |                     |                     |                     |                     |                     | •                   |                     | -                      | 1 - 489             |                     |                     |                                      |  |                     |                        | 3 - 359           |                   |                   | 808 - 383           |                     |                     |                        |                    | _                   | 3684 - 283                    |
|  |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                        | 691                 |                     |                     |                                      |  |                     |                        | 692               |                   |                   | 693                 |                     |                     |                        |                    |                     | 694                           |
|  | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1041049             |                     |                     |                                      |  |                     |                        | 1041070           |                   |                   | 1041900             |                     | •                   |                        | •                  |                     | 1042462                       |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HOGDP49             |                     |                     |                                      |  |                     |                        | HOFMK22           |                   |                   | HBGNT69             |                     |                     |                        |                    |                     | HSPSI42                       |

| 300071,                               | 300110,                               | 300600,                               | 301000,                                 | 301000,                                 | 301830, | 309470,                             | 309500,                  | 309610,                                 | 309850,                                 | 311050,                                 | 312060                                  |   |   |   |   |   |   |   |   | <br>                                    |   |   |  | -                                      |   |                                     |                           |                                      |
|---------------------------------------|---------------------------------------|---------------------------------------|---|---|---------|-------------------------------------|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|---|-------------------------------------|---------------------------|--------------------------------------|
| Arg-20 to Lys-35, L0596: 8, S0010: 7, | Gly-45 to Gly-56, L0754: 7, L0731: 7, | Pro-81 to Cys-99, L0758: 7, L0595: 7, | Arg-195 to Ser-207, S0007: 6, L0741: 6, | Ser-287 to Pro-292, L0591: 6, H0556: 5, | _       | Asn-336 to Met- L0665: 5, L0743: 5, | 341, L0748: 5, L0745: 5, | Ser-357 to Arg-364, L0747: 5, H0657: 4, | Cys-416 to Asp-430, L0771: 4, L0663: 4, | Gln-450 to Asp-455, L0664: 4, H0689: 4, | Pro-509 to Thr-516, L0742: 4, L0439: 4, | Arg-523 to Gly-529, L0592: 4, L0362: 4, | Lys-541 to Lys-546, 80276: 4, H0661: 3, | Ser-623 to Arg-634, H0176: 3, H0545: 3, | Lyr-636 to Gln-642, H0178: 3, H0424: 3, | Asp-661 to Leu-671, L0369: 3, L0766: 3, | Glu-692 to Lys-703, L0659: 3, H0547: 3, | Gln-734 to Tyr-742, S0406: 3, L0750: 3, | Thr-792 to Ile-798, L0599: 3, L0361: 3, | Phe-875 to Gly-880, T0049: 2, H0484: 2, | Ser-886 to Gln-891, S0420: 2, S0360: 2, | Val-897 to Glu-903, L0717: 2, H0370: 2, | Glu-926 to Asn-932,H0333: 2, H0635: 2, | Arg-945 to Asp-950,H0318: 2, H0196: 2, | Pro-952 to Lys-958, H0085: 2, H0546: 2, | Gly-991 to Gly- H0050: 2, T0010: 2, | 1001, H0428: 2, H0213: 2, | Pro-1019 to Trp- H0674: 2, H0591: 2, |
|                                       |                                       |                                       |   |   |         |                                     |                          |   |   |   | -                                       |   |   |   |   |   |   |   |   |   |   |   |  |  |   |                                     |                           |                                      |
|                                       |                                       |                                       |   |   |         |                                     |                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   | •                                       |  | ,                                      |   | -                                   | ,                         |                                      |

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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0100: 2, S0142: 2, | L5575: 2, L0372: 2, | L0764: 2, L0774: 2, | L0775: 2, L0378: 2, | L0776: 2, L0657: 2, | L0636: 2, H0144: 2, | L0565: 2, H0690: 2, | H0660: 2, S3014: 2, | S0028: 2, L0746: 2, | L0749: 2, L0752: 2, | L0753: 2, S0436: 2, | L0588: 2, L0608: 2, | S0026: 2, H0352: 2, | H0395: 1, H0713: 1, | L0785: 1, H0483: 1, | S0418: 1, S0442: 1, | H0733: 1, H0208: 1, | S0045: 1, H0393: 1, | H0351: 1, S0278: 1, | H0549: 1, L0622: 1, | T0039: 1, H0250: 1, | H0618: 1, T0048: 1, | H0581: 1, H0596: 1, | L0040: 1, H0597: 1, | H0544: 1, L0041: 1, | H0086: 1, N0006: 1, | H0620: 1, H0057: 1, | H0051: 1, S0051: 1, | H0083: 1, H0594: 1, | H0188: 1, H0039: 1, |
| 1028,               | Lys-1082 to Met-    | 1091,               | Val-1098 to Gly-    | 1104,               | Cys-1116 to Glu-    | 1122.               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | _                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | <del></del>         |                     | -                   |                     |                     | -                   |                     | -                   |                     |
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|            |             |               |          |        |          |          |               |            | _        |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
|------------|-------------|---------------|----------|--------|----------|----------|---------------|------------|----------|--------|----------|----------------|----------|----------|--------|--------|--------|--------|--------|----------|----------|------------|----------|----------|----------|------------------|--|------------------|------------------|
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
| ļ<br>L     |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  | i                |
|            |             |               |          |        |          | •        |               |            |          |        |          |                | •        |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
| _          |             |               |          |        |          |          |               |            |          |        |          |                | -        |          |        |        |        |        |        |          |          |            |          |          |          |                  | <u>.                                    </u> | •                |                  |
|            | ·           |               | •        |        | •        |          | _ •           | •          | •        | •      |          | •              | •        | •        | ·      | •      | •      | •      | ·      | •        | •        | <b>_</b> , | ۲,       | 1,       |          | 1,               |  | •                |                  |
| 06: 1      | 1, H0405: 1 | 17: ]         | L0455: 1 | 38: 1  | T0067: 1 | H0413: ] | 69: 1         | 51:1       | 40:1     | 22: 1  | 36: 1    | 38: 1          | 46: 1    | 94: 1    | 76: 1  | 55: 1  | 35: 1  | 82: 1  | 19: 1  | L0790: 1 | 32: 1    | H0520:     |          | .659     | 572:     | :969             | 37:1   | 40:1             | 57: 1            |
| , T0006: 1 | H04         | H06           | 7        | H0038: | T00      | H04      | T0069:        | , L0351: 1 | \$08     | S0422: | L0536:   | L0638:         | L0646: ] | L07      | L0376: | L0655: | L0635: | L0382: | L0519: | 107      | L0532:   | H05        | , H0683: | , H0659: | , H0672: | H0521: 1, H0696: | H0694: 1, S0037:                             | .0744: 1, L0740: | .0780: 1, L0757: |
| 3: 1,      | 4: 1,       | 11: 1,        | 9: 1,    | 5: 1,  | 77: 1,   | 2: 1,    | $\overline{}$ |            |          |        | 9:1,     | 5: 1,          | 7: 1,    | 1:1,     | 0.1    | 3: 1,  | 6: 1,  | 8: 1,  | 9: 1,  | 11: 1,   | 3: 1,    |            |          |          |          | 21: 1            | 4:1  | 4, 1,            | 0: 1,            |
| L0483: 1   | H0604:      | H0181:        | H0169:   | H0135: | H0087:   | H0412:   | H0059:        | T0004: 1   | T0041: ] | H0641: | H0529: 1 | L0535:         | L0637: ] | L0521: 1 | L0650: | L0653: | T0606: | L0518: | L0809: | L0541:   | L0793: 1 | H0723: 1   | H0593: 1 | H0684:   | H0648: 1 | H052             | 90H  | L074             | 1.078            |
|            | _=-         |               |          |        |          |          |               |            |          |        |          | <u>, r - 1</u> | <u></u>  |          |        |        |        |        |        |          | <u></u>  |            |          |          |          |                  |  | •                |                  |
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          | •        |            |          |          |          |                  |  |                  |                  |
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
| _          | <u> </u>    |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  | -                |                  |
|            |             |               | •        | •      |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
| -          |             |               |          |        |          |          |               |            |          |        |          | _              |          |          | _      |        |        |        | •      |          |          |            |          | _        |          |                  |  |                  |                  |
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
| -          |             | <del></del> . |          |        |          |          |               |            |          | _      |          |                | _        |          |        |        |        |        |        |          |          |            | _        |          |          |                  |  |                  |                  |
|            |             |               |          |        | -        |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |
| _          |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  | <u> </u>                                     |                  |                  |
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  | ,                |                  |
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        | -      |          |          |            |          |          |          |                  |  |                  |                  |
|            |             |               |          |        |          |          |               |            |          |        |          |                |          |          |        |        |        |        |        |          |          |            |          |          |          |                  |  |                  |                  |

| <del></del>   |  |   |
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|   |  | 147440,<br>201470,<br>235800,<br>273300   |
|   |  | 12922   |
| L0759: 1, H0445: 1,<br>L0587: 1, L0589: 1,<br>L0593: 1, L0594: 1,<br>S0106: 1, S0011: 1,<br>H0136: 1, H0423: 1 and<br>H0293: 1. | H0658: 2, H0622: 2, H0622: 1, H0581: 1, S0050: 1, H0412: 1, H0641: 1, H0641: 1, L0662: 1, L0662: 1, L0766: 1, L0775: 1, L0805: 1, L0805: 1, L0805: 1, L0805: 1, L0809: 1, L0805: 1, H0689: 1, L0438: 1, H0625: 1, L0439: 1 and L0755: 1. | S0410: 52, H0617: 5,<br>L0774: 4, S0408: 3,<br>H0360: 3, H0486: 3,<br>L0809: 3, S0380: 3,<br>L0751: 3, L0749: 3,<br>L0361: 3, S0358: 2,<br>S0376: 2, S0360: 2,<br>L0764: 2, L0779: 2,<br>L0752: 2, H0484: 1,<br>H0483: 1, S0442: 1,<br>H0734: 1, H0370: 1,<br>H0599: 1, H0575: 1, |
|   | Leu-17 to Glu-22, Pro-44 to Gly-51.  | Pro-18 to Pro-24, Thr-45 to Gly-54, Ser-60 to Ser-67, Ala-82 to His-92, Pro-94 to Ser-106, Pro-126 to Arg-133.  |
|   | 2870   | 2871  |
|   | 174 - 344  | 39 - 476  |
| ·   | \$69   | 969   |
|   | 1042649  | 1042859   |
|   | <b>НР</b> ДФД23  | HWMBA10   |

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|---|--|---|---------------------|--|---|---|---|--|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------------|--|
| H0706: 1, H0744: 1,<br>H0231: 1, L0163: 1,<br>H0083: 1, H0510: 1,<br>H0606: 1, H0038: 1,<br>T0067: 1, S0438: 1,<br>S0422: 1, 10770: 1 | L0803: 1, L0806: 1,<br>L0776: 1, L0792: 1,<br>L0793: 1, H0660: 1,<br>S0406: 1, H0631: 1, | H0445: 1, S0436: 1,<br>H0543: 1 and S0424: 1. | L0805: 5, L0766: 4, | H0541: 3, S0440: 3,<br>H0650: 2, H0656: 2, | Asp-138 to Gly-149, H0156: 2, S0003: 2, | Ser-161 to 1nr-168, HU391: 2, HU264: 2,<br>Asn-225 to Are-235.H0560: 2, L0598: 2. | S0374: 2, L0438: 2,                     | L0749: 2, L0752: 2,                    |                     | L0005:              | S0408: 1, H0580: 1, | H0619: 1,           | H0013: 1,           | H0194: 1, T0103: 1,         | H0083: 1, H0551: 1,<br>H0477: 1, H0488: 1, |
|   |  |   | Asp-16 to Ser-25,   | Arg-52 to Lys-74,<br>Ile-102 to Asn-109,   | Asp-138 to Gly-149,                     | Ser-161 to 1 nr-168,<br>Asn-225 to Arg-235.                                       | Asn-247 to Lys-256, S0374: 2, L0438: 2, | His-302 to Cys-311, L0749: 2, L0752: 2 | Cys-355 to Tyr-361, | Cys-365 to Pro-375, | Ile-389 to Gln-398, | Ile-429 to His-502, | Thr-505 to Asp-533, | Lys-539 to Ser-545. [H0194: |  |
|   |  |   | 2872                |  |   |   |   |  |                     |                     |                     |                     |                     |                             |  |
|   | · ·  |   | 2534 - 900          |  |   |   |   |  |                     |                     |                     |                     |                     |                             |  |
|   |  |   | <i>L</i> 69         |  |   |   |   |  |                     |                     |                     |                     |                     |                             |  |
|   |  |   | 1042871             |  |   |   |   |  |                     |                     |                     |                     |                     |                             |  |
|   |  |   | HACNG39             |  |   |   |   |  |                     |                     | -                   |                     |                     |                             | -  |

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|--|---|-------------------|---|--|---------------------|---|--|
|  |   |                   |   |  |                     |   |  |
| S0464: 1, L0773: 1,<br>L0803: 1, L0776: 1,<br>L0657: 1, L0789: 1,<br>L0665: 1, H0547: 1,<br>H0670: 1, S3012: 1,<br>L0748: 1, L0779: 1,<br>L0777: 1, L0758: 1,<br>S0436: 1, S0194: 1 and<br>H0422: 1. | AR089: 1, AR060: 1,<br>AR055: 1, AR096: 1,<br>AR053: 0, AR061: 0, | 0<br>19, H0046: 1 | L0659: 8, L0752: 7,<br>L0662: 6, H0435: 6,<br>H0648: 6, L0803: 5, | S0356: 4, S0440: 4,<br>L0794: 4, L0663: 4, | H0661: 3, S0360: 3, | S0408: 3, H0598: 3,<br>L0809: 3, L0665: 3,<br>S0374: 3, L0438: 3, | L0751: 3, L0731: 3,<br>L0362: 3, H0171: 2,<br>S0358: 2, S0376: 2,<br>H0676: 2, H0393: 2, |
|  | Arg-11 to Gly-36.   |                   |   |  |                     |   | •.   |
| ·  | 2873  |                   |   |  |                     |   |  |
|  | 32 - 676  |                   |   |  |                     |   |  |
|  | 869   |                   |   |  |                     |   |  |
|  | 1042951   |                   |   |  |                     |   |  |
|  | HETKL27   |                   |   |  |                     |   |  |

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|---------------------|---------------------|--------------------|---------------------|----------------------|---------------------|------------------|---------------------|-------------|------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|------------------|------------------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|-----------|
|                     |                     |                    | •                   |                      |                     |                  |                     | ,           |                  |             |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |           |           |           |           |           |           |                  |           |
| _                   |                     |                    |                     |                      |                     |                  |                     |             |                  |             |                  |                  |                  | _                |                  |                  |                  |           |                  |                  |                  | -         |           |           |           |           |           |                  | -         |
| 2: 2,               | 5: 2,               | . 2                | . 2                 | .2,                  | 2,                  | 5: 2,            | 2,                  | 2,          | ÷,<br>2,         | 2,          | 5: 1,            | i: 1,            | <b>)</b> : 1,    | 5: 1,            | 1,               | 3: 1,            | 3: 1,            | i: 1,     | 5: 1,            | 4: 1,            | <del>-</del>     | ): 1,     | ): 1,     | <br>1,    | : 1,      | 2: 1,     | 2: 1,     | 7: 1,            | 0: 1,     |
| H0586: 2, H0052: 2, | 10067: 2, H0646: 2, | 0646: 2, L0764: 2, | .0364: 2, L0775: 2, | .0806: 2, L.0657: 2, | .0788: 2, L0666: 2, | H0659: 2, H0666: | S0330: 2, L0748: 2, | 1.0750: 2,  | .0777: 2, L0759: | L0608: 2    | .0411: 1, H0686: | S0444: 1, H0441: | H0333: 1, T0109: | .0022: 1, H0575: | S0010: 1, S0346: | H0596: 1, L0738: | S6028: 1, H0688: | T0006:    | H0644: 1, H0165: | H0040: 1, H0494: | S0466: 1, S0438: | L0640:    | L0800:    | L0389:    | L0653     | L0382:    | L0532:    | .0664: 1, H0547: | H0690:    |
| 586: 2,             | 67: 2,              | 46: 2,             | 64: 2,              | 06: 2,               | 88: 2,              | 559: 2,          | 30:2,               | .0745: 2, I | 77:2,            | .0599: 2, I | H1: 1,           | 4: 1,            | 333: 1,          | )22: 1,          | 10: 1,           | 596: 1,          | 28: 1,           | F0023: 1, | <u>\$</u> 4: 1,  | 240: 1,          | 66: 1,           | .0762: 1, | L0772: 1, | ,0648: 1, | .0805: 1, | .0776: 1, | .0789: 1, | 564: 1,          | H0689: 1, |
| HOH                 | <u>100</u>          | <u>§</u>           | <u> </u>            | <u> </u>             | 20                  | HO               | <u>S</u> 03         | <u>8</u>    | <u>8</u>         | 5           | <u>5</u>         | S<br>20          | Œ                | <u> </u>         | 200              | Ë                | S60              | 70        | ĎH.              | HO               | S04              | 0         | 10        | <u> </u>  | <u> </u>  | 107       | 10        | <u>3</u>         | HO        |
|                     |                     |                    |                     |                      |                     |                  |                     |             |                  |             |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |           |           |           |           |           |           |                  |           |
|                     |                     |                    |                     |                      |                     |                  |                     |             |                  |             |                  |                  |                  |                  |                  |                  |                  |           |                  | •                |                  |           |           |           |           |           |           |                  |           |
|                     |                     |                    |                     |                      |                     |                  |                     |             |                  |             |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |           |           |           |           |           |           |                  |           |
|                     |                     |                    |                     |                      |                     |                  |                     |             |                  |             |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |           |           |           |           |           |           | ;                |           |
| $\vdash$            |                     |                    |                     |                      |                     |                  |                     |             |                  |             |                  |                  |                  |                  | •                |                  |                  |           |                  |                  |                  |           |           |           |           |           |           | :                |           |
|                     |                     |                    |                     |                      |                     |                  |                     |             |                  |             |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |           |           |           | ٠         |           |           |                  |           |
|                     |                     |                    |                     |                      |                     |                  | -                   |             |                  |             |                  |                  |                  |                  | -                |                  |                  |           |                  |                  |                  | -         | -         |           | ·         |           |           |                  |           |
| $\vdash$            |                     |                    | _                   | _                    |                     |                  |                     |             |                  |             |                  |                  |                  |                  |                  |                  |                  |           | <del></del> ;    |                  | · · · · · ·      |           |           |           |           |           |           |                  | اـــــا   |
|                     |                     |                    |                     |                      |                     |                  |                     |             |                  |             |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |           |           |           |           |           |           |                  |           |
| <u> </u>            |                     |                    |                     | <del></del>          |                     |                  |                     | ,           |                  |             |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |           | _         | <u>.</u>  |           |           |           |                  |           |
|                     |                     |                    |                     |                      |                     |                  |                     |             |                  |             |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |           |           |           |           |           |           |                  |           |
|                     |                     |                    |                     | -                    |                     |                  | •                   |             |                  |             |                  |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |           |           |           |           |           |           |                  |           |

|  | 109400,<br>132800,<br>132800,<br>186855,<br>223900,<br>253800,<br>278700,<br>602088   |
|--|---|
|  |   |
| H0684: 1, H0658: 1,<br>S0380: 1, H0704: 1,<br>S0168: 1, H0478: 1,<br>S0037: 1, L0742: 1,<br>L0749: 1, L0755: 1,<br>S0434: 1, S0436: 1 and<br>H0506: 1. | H0638: 73, H0641: 67, 9q31<br>S0358: 25, H0521: 24,<br>L0747: 23, S0408: 17,<br>S0360: 16, H0659: 14,<br>L0748: 13, L0731: 13,<br>H0250: 12, H0494: 12,<br>L0757: 12, S0444: 11,<br>S0026: 11, S0440: 10,<br>S0328: 10, S0206: 9,<br>S0132: 8, S0144: 8,<br>S0007: 7, H0574: 7,<br>S0374: 7, S0126: 7,<br>S0330: 7, L0754: 7,<br>L0749: 7, H0140: 6,<br>H0545: 6, H0316: 6,<br>H0522: 6, S0242: 6,<br>H0522: 6, S0406: 5,<br>H0486: 5, S046: 5,<br>H0486: 5, S046: 5,<br>S0040: 4, S0442: 4,<br>H0546: 4, H0684: 4, |
| H0684: 1<br>S0380: 1<br>S0168: 1<br>S0037: 1<br>L0749: 1<br>S0434: 1<br>H0506: 1   | H0638<br>S0358:<br>S0358:<br>L0747:<br>S0360:<br>L0757:<br>S0026:<br>S0328:<br>S0328:<br>S0328:<br>S0374:<br>S0374:<br>S0374:<br>H0545:<br>H0522:<br>H0657:<br>H0657:<br>H0657:<br>H0657:<br>H0657:<br>H0657:<br>H0657:<br>H0657:<br>H0657:   |
|  |   |
|  | 2874  |
|  | 3 - 494   |
|  | 669   |
|  | 1043273   |
|  | HPCTH04   |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |
| S3014: 4, L0742: 4, | L0740: 4, L0756: 4, | L0752: 4, L0755: 4, | L0758: 4, H0686: 3, | H0341: 3, H0664: 3, | S0222: 3, H0592: 3, | H0331: 3, T0109: 3, | T0115: 3, H0046: 3, | H0014: 3, S0003: 3, | L0809: 3, H0547: 3, | H0660: 3, H0667: 3, | H0542: 3, H0171: 2, | T0049: 2, H0663: 2, | S0420: 2, S0356: 2, | H0580: 2, S0045: 2, | S0278: 2, H0537: 2, | H0333: 2, H0069: 2, | H0427: 2, H0098: 2, | H0597: 2, H0544: 2, | H0150: 2, L0471: 2, | H0060: 2, H0109: 2, | H0266: 2, H0644: 2, | H0032: 2, S0438: 2, | H0633: 2, L0762: 2, | L0769: 2, L0372: 2, | L0662: 2, L0806: 2, | L0789: 2, L0666: 2, | H0682: 2, H0670: 2, | L0602: 2, H0696: 2, | S0404: 2, L0588: 2, |
|                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     | <del>-•</del>       | -92                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     | <u>, .</u>          |                     |                     | <u> </u>            |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |

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|                     |                     |                     | _                   |                     |                     |                     |                     | <u> </u>            |                     |                     | <u> </u>            | <u>. , – </u>       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     | -                   |
|                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |
| .0581: 2, L0361: 2, | S0194: 2, L0615: 1, | H0141: 1, H0159: 1, | H0585: 1, S0342: 1, | H0294: 1, S0430: 1, | H0656: 1, H0661: 1, | H0125: 1, S0354: 1, | H0675: 1, H0637: 1, | H0208: 1, H0393: 1, | H0411: 1, H0586: 1, | 30497: 1, H0642: 1, | H0643: 1, H0632: 1, | S0280: 1, H0042: 1, | 10575: 1, H0318: 1, | H0263: 1, T0110: 1, | H0121: 1, H0530: 1, | H0350: 1, H0015: 1, | 50388: 1, S0051: 1, | H0375: 1, H0061: 1, | S0022: 1, S0214: 1, | H0328: 1, L0483: 1, | H0031: 1, H0628: 1, | .0055: 1, H0165: 1, | H0674: 1, H0598: 1, | HO591: 1, H0038: 1, | H0040: 1, H0087: 1, | H0272: 1, H0413: 1, | .0475: 1, S0448: 1, | S0464: 1, S0306: 1, | S0466: 1, H0130: 1, |
| 100                 | SO.                 | HO                  | HO                  | )HO:                | Ф <u>Н</u>          | OH.                 | <u>(H</u>           | OH                  | OH<br>HO            | OH .                | ÓH                  | 202                 | HO                  | OH                  | OH<br>HO            | OH                  | .0S                 | OH                  | )OS                 | OH                  | OH                  | ğ                   | OH.                 | OH<br>HO            | 0H                  | HO                  | Ä                   | OS                  | 80°                 |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     | _                   |                     |                     |                     | <del></del>         |                     |                     |                     |                     | <u></u>             | _                   | <del>_</del>        |                     |                     |                     |                     |                     | . <del></del>       |
| ·                   |                     |                     | _                   | <u></u>             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _,_                 |                     |
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|  | 172400,<br>172400,<br>172400,<br>180901,  |
|--|---|
|  | 19912-913.1164731<br>172400<br>172400<br>180901   |
| H0144: 1, H0435: 1,<br>H0658: 1, H0672: 1,<br>S0378: 1, S0152: 1,<br>H0523: 1, H0187: 1,<br>H0627: 1, H0631: 1,<br>S0028: 1, S0032: 1,<br>L0759: 1, S0260: 1,<br>S0434: 1, L0608: 1,<br>H0668: 1, H0665: 1,<br>H0136: 1, S0192: 1,<br>S0196: 1, S0424: 1,<br>S0196: 1, H0506: 1, | L0777: 16, L0779: 11,<br>L0748: 10, S0358: 7,<br>H0494: 7, L0759: 6,<br>L0362: 6, H0529: 5, |
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| 180901,             | 221770,             | 248600,             | 600918,             | 602716              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0766: 5, S0003: 4, | L0770: 4, L0769: 4, | S0330: 4, L0740: 4, | L0747: 4, L0731: 4, | L0758: 4, L0601: 4, | H0664: 3, S0356: 3, | S0360: 3, H0123: 3, | L0471: 3, H0620: 3, | H0100: 3, S0150: 3, | L0764: 3, L0771: 3, | L0662: 3, L0649: 3, | L0803: 3, L0527: 3, | S0374: 3, H0682: 3, | H0660: 3, H0666: 3, | H0648: 3, H0521: 3, | L0755: 3, H0542: 3, | H0556: 2, T0049: 2, | S0418: 2, S0007: 2, | S0045: 2, S0046: 2, | H0443: 2, S0222: 2, | H0586: 2, S0010: 2, | H0581: 2, H0012: 2, | H0373: 2, H0266: 2, | H0031: 2, H0032: 2, | H0551: 2, H0412: 2, | H0538: 2, L0369: 2, | L0637: 2, L0772: 2, | L0773: 2, L0768: 2, | L0375: 2, L0659: 2, | S0126: 2, H0658: 2, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | ·                   |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     | <del></del>         |                     | _                   |                     | ·                   |
|                     |                     |                     | •••                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
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|  |                     |                  | <u>.</u>         |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  | _             |
|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  | ÷                |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
| ດໂດ່                                       | ົດເ                 | T,               | 1,               | 1,          | 1,               | ^          | 1,                | 1,          | 1,       | ٠,-      | 1,               | 1,       | 1,     | ٦,               | 1,               |                  | <del>-</del>     | F,               | T           | ·<br><del>-</del> | 1,               | 1,               | 1,               | 1,               | 1,               | ٦,               | Ţ,               |               |
| .0439: 2, L0751: 2,<br>.0750: 2. L0752: 2. | .0596; 2, S0424: 2, | 385:             | 583:             | 16:         | 07:              | 32: 1      | . <del>4</del> 9: | 370:        | H0299:   | , H0497: | 559:             | , H0486: | S0280: | 599:             | 336:             | 518:             | 18:              | 52:              | , H0235:    | 88:               | 354:             | 28:              | 128:             | :99              | 35:              | .:9              | 346:             | 4             |
| 25   | S02                 | HO               | HO,              | S01         | T00              | , S0132:   | HO                | H0.         | H00      | 70H      | H0;              | H04      | S02    | HQ.              | )H0              | ĎH.              | H03              | H00              | , H0        | S03               | , HO             | 986              | HOH,             | S03              | H01              | 100              | HÖ.              | SOS           |
| 9. 9.<br>9. 9.                             | 6. 2,<br>5,         | 6: 2,            | 4: 1,            | 6: 1,       | 3: 1,            | 4: 1,      | 9: 1,             | 0: 1,       | 9: 1,    | _        | 4: 1,            | _        | 4: 1,  | 6: 1,            | 5: 1,            | 4.<br>L          | 6: 1,            | 9: 1,            | 5: 1.       | 5: 1,             | 1: 1,            | 5: 1,            | 5: 1,            | 4: 1             | 6: 1,            | 6: 1,            | 3:1              | S0144 1 S0344 |
| .0439: 2, L0751: 2,<br>.0750: 2. L0752: 2. | 059                 | 10506: 2, H0585: | H0294: 1, H0583: | <b>H065</b> | H0483: 1, T0007: | S0354:     | H0369: 1, H0549:  | 1055        | H0409:   | H0600;   | H0574: 1, H0559: | .0623:   | 10244: | H0156: 1, H0599: | HO575: 1, H0036: | 10004: 1, H0618: | S0346: 1, H0318: | S0049: 1, H0052: | H0085: 1    | H0545: 1, S0388:  | H0021: 1, H0354: | H0355: 1, S6028: | H0615: 1, H0428: | T0424: 1, S0366: | S0036: 1, H0135: | S0466: 1, L0065: | H0633: 1, H0646: | 2014          |
|  |                     | <u> </u>         | <u>, 11</u>      |             | <u> </u>         | <u>(7)</u> | بلر               | <u>, L.</u> | <u> </u> | <u></u>  | بطبو             |          | _=     | بسلم             | <u> </u>         | <u> </u>         | <u> </u>         | <u>(/)</u>       | <u>,, -</u> | -                 | <u> </u>         | <u> </u>         |                  | <u> </u>         | 1                | (9)              | <u> </u>         |               |
|  |                     |                  | •                |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             | •                 |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
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|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     | -                |                  |             | -                |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             | •                 |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   | -                | ,                |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  | •          |                   |             |          |          | ,                |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  |            |                   |             |          |          | _                |          |        |                  | <u>.</u>         |                  |                  | _                |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  | -                |                  |             |                   |                  |                  | -                |                  |                  |                  | <del></del> ,    |               |
|  |                     | ·                |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  | <u> </u>      |
|  |                     | •                |                  |             | •                |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |
|  |                     |                  |                  |             |                  |            |                   |             |          |          |                  |          |        |                  |                  |                  |                  |                  |             |                   |                  |                  |                  |                  |                  |                  |                  |               |

|   | 105580,<br>133780,<br>203100,<br>203100,<br>602574,   |
|---|---|
|   | 11921-922 1   |
| S0422: 1, S0426: 1,<br>L0763: 1, L0638: 1,<br>L0796: 1, L0761: 1,<br>L0800: 1, L0372: 1,<br>L0800: 1, L0774: 1,<br>L0804: 1, L0774: 1,<br>L0775: 1, L0651: 1,<br>L053: 1, L0657: 1,<br>L0558: 1, L0657: 1,<br>H0550: 1, H0519: 1,<br>H0520: 1, H0519: 1,<br>H0593: 1, H0589: 1,<br>S0380: 1, H0518: 1,<br>S0380: 1, L0749: 1,<br>L0780: 1, L0749: 1,<br>L0780: 1, L0749: 1,<br>L0780: 1, L0749: 1,<br>L0780: 1, L0765: 1,<br>H0134: 1, S0436: 1,<br>L0780: 1, L0765: 1,<br>H0653: 1, H0665: 1 and<br>H0653: 1, H0665: 1 and | H0656: 16, S0360: 12,<br>H0445: 10, H0059: 9,<br>L0659: 8, L0662: 7,<br>L0748: 7, H0650: 6,<br>H0341: 6, H0318: 6,<br>L0731: 6, S0376: 5,<br>S0440: 5, S0380: 5,  |
|   | Lys-1 to Cys-12, H0656: 16, S0360: Glin-51 to Leu-56, H0445: 10, H0059: Asp-63 to Asn-70, L0659: 8, L0662: 7, Lys-75 to Glin-80, L0748: 7, H0650: 6, Pro-116 to Thr-122, H0341: 6, H0318: 6 Gly-181 to Gly-190, L0731: 6, S0376: 5, Asp-210 to Gly-218, S0440: 5, S0380: 5, |
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|                       |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del>-</del>        |                     | _                   |                     |                     |                     |   |                     |                     |                     |                     |                     |   | _                   |                     |                     |                     |                     |                     |
| H0657: 4, H0125: 4,   | L0655: 4, L0666: 4, | S0358: 3, H0486: 3, | H0014: 3, H0648: 3, | .0602: 3, H0255: 2, | H0602: 2, H0039: 2, | H0622: 2, H0264: 2, | .0763: 2, L0766: 2, | .0774: 2, L0806: 2, | .0776: 2, L0665: 2, | H0672: 2, S0328: 2, | H0134: 2, H0555: 2, | .0743: 2, H0671: 1, | H0402: 1, H0638: 1, | S0007: 1, H0592: 1, | H0250: 1, H0635: 1, | H0599: 1, H0108: 1,                           | H0004: 1, H0597: 1, | H0231: 1, H0046: 1, | H0169: 1, H0316: 1, | r0042: 1, H0646: 1, | JO762: 1, L0800: 1, |   | .0387: 1, L5574: 1, | .0527: 1, L0657: 1, | .0634: 1, L0809: 1, | H0690: 1, H0682: 1, | H0435: 1, H0659: 1, | S0378: 1, H0694: 1, |
| Thr-252 to Ile-268, I | Leu-274 to Lys-284. | S                   |                     |                     | <u></u>             |                     |                     |                     |                     | <u> </u>            |                     |                     | <u> </u>            | <u> </u>            |                     | <u>, , , , , , , , , , , , , , , , , , , </u> | <u></u>             |                     |                     |                     |                     |   |                     |                     |                     |                     | <u></u>             | ,                   |
|                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |   |                     |                     | -                   |                     |                     |                     |
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| <u> </u>            |                     | Т  | _       |                     |                     |                       |                     |                     |                                      |                       | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                    |  | _                   |                     | . —                  |                      |                     |                     |
|---------------------|---------------------|----|---------|---------------------|---------------------|-----------------------|---------------------|---------------------|--------------------------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|--|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|
|                     |                     |    | 134934, | 134934,             | 134934,             | 134934,               | 134934,             | 143100,             | 180072,                              | 180072,               | 194190,             | 252800,             | 252800,             | 252800,             | 96009               |                     |                     |                     |                     |                     |                     |                      |  |                     |                     |                      |                      |                     |                     |
|                     |                     | ,  | 4p16.3  |                     |                     |                       |                     |                     |                                      |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |  | i                   |                     |                      |                      |                     | ٠                   |
| L0747: 1, L0749: 1, | .0779: 1, L0755: 1, | _: | o,      | .0439: 8, H0623: 7, | H0052: 6, H0013: 5, | J0776: 5, L0438: 5,   | L0740: 5, H0521: 4, | L0756: 4, H0265: 3, | 10556: 3, S0360: 3,                  | L0010: 3, H0620: 3,   | .0662: 3, L0665: 3, | H0522: 3, S0116: 2, | S0418: 2, S0358: 2, | S0046: 2, H0635: 2, | H0575: 2, H0590: 2, | S0010: 2, L0109: 2, | .0471: 2, H0428: 2, | H0622: 2, H0031: 2, | H0038: 2, H0264: 2, | H0059: 2, S0015: 2, | H0641: 2, L0770: 2, | ,0769: 2, L.0773: 2, | .0774: 2, L0655: 2,                          | .0659: 2, L0789: 2, | S0126: 2, S0037: 2, | .0744: 2, 1.0747: 2, | .0779: 2, L.0758: 2, | .0601: 2, H0170: 1, | H0686: 1, S0040: 1, |
|                     |                     |    | _       | Arg-26 to Gly-42, L |                     | Glu-106 to Ala-122, L | _                   |                     | Leu-197 to Thr-206, H0556: 3, S0360: | Pro-208 to Tyr-219. L |                     | <u> </u>            | S                   | S                   | <u> </u>            | .s                  | 브                   | <u> </u>            | <u> 119</u>         | يكز                 |                     |                      | <u>.                                    </u> | <u></u>             | S                   | <u>-1</u>            | 1                    | <u>, </u>           |                     |
|                     |                     |    | 2877    |                     |                     |                       |                     |                     |                                      |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |  |                     |                     |                      |                      | :                   |                     |
|                     |                     |    | 2754 -  | 2083                |                     |                       |                     |                     |                                      |                       |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                      |  |                     |                     |                      |                      |                     |                     |
|                     |                     |    | 702     |                     |                     |                       |                     |                     |                                      |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |  |                     |                     |                      |                      |                     |                     |
|                     | •                   |    | 1043553 |                     |                     |                       |                     |                     |                                      |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |  |                     | ٠                   |                      |                      |                     |                     |
|                     |                     | 3  | HVVBC43 |                     |                     |                       |                     |                     |                                      |                       |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                      |  |                     |                     |                      |                      | ,                   |                     |

|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              | _            |            |              |          |          |              |                 |          | _                |
|--------------------|------------------|-----------|----------|------------|--------|----------------|------------------|-----|------------|-----------|--------|--------------|--------|--------|-------------|----------|------------------|----------|------------------|--------------|--------------|------------|--------------|----------|----------|--------------|-----------------|----------|------------------|
|                    |                  |           |          |            |        |                |                  |     |            |           |        | •            |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          | - 1              |
|                    |                  |           |          |            |        |                |                  |     |            |           | :      |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          | -        |              |                 |          | _                |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          | 1                |
|                    |                  |           |          |            |        |                |                  | -   |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
| 1,                 | Ή.               | l,        | Τ,       | 7          | 1,     | <del>1</del> , | 1,               | 1,  | 1,         | Τ,        | Ļ      | <del>ب</del> | Ļ,     | ÷      | <del></del> | 1,       | Ļ                | 1,       | 1,               | 1,           | <del>_</del> | Ĺ,         | <del>,</del> | 1,       | 1,       | <del>,</del> | 1,              | Ţ,       | 1,               |
| H0294: 1, T0049: 1 | 57:              | 32:       | , H0663: | 1, S0140:  | H0351: | H0442:         | H0250: 1, H0427: | 96  | S0346: 1   | H0251:    | 99     | H0050:       | H0051: | H0266: | H0286:      | L0483: 1 | H0030: 1, H0376: | 99       | H0634: 1, H0616: | <b>3</b> 68: | H0100:       | S0144:     | 1, 1.0772:   | 41:      | 1.0767:  | L0804: 1     | 0606: 1, L0809: | 63:      | .0664: 1, H0144: |
| T00                | H0650: 1, H0657: | 1, S0282: | H        | <b>S01</b> | H03    | H0             | 70H              | H05 | <b>SG3</b> | H02       | HOK    | HO           | HO     | HOZ    | H02         | Z        | HO               | HO       | HO               | H02          | H0           | S01        | 2            | L0641:   | 12       | 8            | 807             | 200      | H01              |
| 1,                 | ÷                |           | -        |            | ÷      | 1,             | 1,               | Ι,  |            |           |        |              | Į,     | L,     | <u>-</u>    | Ξ.       | . <u>.</u>       | <u>;</u> | <u>-</u> ;       | . i          | _            | <u>.</u> ; |              | •        | •        |              | 1,              | Τ,       | : 1,             |
| 294                | 650              | S0212: 1  | 10484:   | 10305: ]   | 10393: | 10437:         | 250              | 156 | H0036: 1   | H0318: 1, | 10457: | H0123: 1,    | 10024: | 10083: | 10416:      | 40328:   | 030              | 598      | 634              | 551          | 40269: 1,    | 10494: 1,  | 0763:        | ,0646: 1 | .0771: 1 | 0766: ]      | 909             | 999      | 664              |
| HO                 | 瓱                | 80.       | 呈        | 品          | 呈      | 표              | 요                | 요   | 呈          | 8         | 요      | 呈            | 呈      | 丑      | 呈           | 료        | 且                | <u> </u> | 丑                | 呈            | 至            | 표          | <u>3</u>     | <u>ප</u> | 2        | <u>김</u>     | <u>유</u>        | <u>ප</u> | ន្ន              |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  | •        |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
| _                  |                  |           |          |            |        |                |                  |     |            |           | _      |              |        |        |             |          |                  |          |                  | _            |              |            |              |          |          |              |                 |          | _                |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 | ,        |                  |
| _                  |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          | _        | _            |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        | •      |             |          |                  | i        |                  |              |              |            |              |          |          |              |                 |          |                  |
| L                  |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 | _        |                  |
| ļ                  |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              | •               |          |                  |
| •                  |                  |           |          |            |        |                |                  |     |            | •         |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           | •      |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
| L                  |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            | •      |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
|                    |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |
| l                  |                  |           |          |            |        |                |                  |     |            |           |        |              |        |        |             |          |                  |          |                  |              |              |            |              |          |          |              |                 |          |                  |

| H0520: 1, H0519: 1,<br>H0682: 1, H0659: 1,<br>H0672: 1, S0328: 1,<br>H0539: 1, S0152: 1,<br>H0555: 1, H0626: 1,<br>S3014: 1, S0028: 1,<br>L0751: 1, L0786: 1,<br>L0777: 1, L0731: 1,<br>L0757: 1, L0739: 1,<br>H0667: 1, H0542: 1,<br>H0667: 1 and H0677: 1. | H0617: 6, L0666: 3,<br>H0188: 2, H0181: 2,<br>H0196: 1, H0039: 1,<br>H0673: 1, L0373: 1,<br>L0775: 1, L0659: 1,<br>L0809: 1, L0789: 1,<br>L0663: 1, L0665: 1,<br>H0658: 1, S0330: 1,<br>S0378: 1 and S0406: 1.  | L0748: 5, L0439: 5,<br>L0751: 3, L0777: 3,<br>L0758: 2, L0596: 2,<br>L0603: 2, S0001: 1,<br>S0278: 1, H0581: 1,<br>H0620: 1, S0388: 1,<br>H0628: 1, H0040: 1,<br>H0616: 1, H0646: 1,<br>L0763: 1, L0770: 1, |
|--|---|---|
|  | Ser-49 to Leu-55, H0617: 6, L06666: 3<br>Pro-151 to Asp-157, H0188: 2, H0181: 2, Ala-168 to Arg-184, H0196: 1, H0039: 1, Pro-191 to Pro-215, H0673: 1, L0373: 1, Pro-255 to Arg-268. L0809: 1, L0789: 1, L0663: 1, L0665: 1, H0658: 1, S0330: 1, S0378: 1 and S0406 | Ala-1 to Asp-16.  |
|  | 2878  | 2879  |
|  | 1010 - 3  | 35 - 439  |
|  | 703   | 704   |
|  | 1044199   | 1044577   |
|  | HTPDM31   | HSQEK12   |

| 7   | <del>,</del>  |
|---|---|
|   | 304040,<br>305100,<br>305450,<br>309605,<br>312760,<br>314250,<br>314580  |
|   | Xq13.1  |
| L0769: 1, L0800: 1,<br>L0794: 1, L0803: 1,<br>L0378: 1, L0776: 1,<br>L0655: 1, L0789: 1,<br>H0670: 1, S0328: 1,<br>H0696: 1, S0406: 1,<br>H0436: 1, L0746: 1,<br>L0779: 1, S0031: 1,<br>L0759: 1, S0011: 1 and<br>S0026: 1. | L0766: 14, L0769: 12,<br>L0774: 10, L0770: 8,<br>L0740: 7, L0759: 7,<br>H0484: 5, H0617: 5,<br>L0803: 5, L0751: 5,<br>L0747: 5, H0483: 4,<br>S0358: 4, H0670: 4,<br>L0780: 4, L0731: 4,<br>H0245: 4, S0436: 4,<br>H0251: 3, H0618: 3,<br>H0251: 3, H0618: 3,<br>L0789: 3, L0761: 3,<br>L0789: 3, L0750: 3,<br>L0789: 3, L0750: 3,<br>L0743: 3, L0750: 3,<br>H0733: 2, S0474: 2,<br>H0733: 2, H0620: 2,<br>H0649: 2, H0428: 2,<br>H0649: 2, L0772: 2   |
|   | Pro-16 to Ala-22, L0766: 14, L0769  Ala-26 to Val-31, L0774: 10, L0770: Ser-66 to Val-73, L0740: 7, L0759: 7  Ala-80 to Pro-90, H0484: 5, H0617: 5 Glu-127 to Ala-135, L0803: 5, L0751: 5 Glu-142 to Glu-161, L0747: 5, H0483: 4 Leu-166 to Trp-173, S0358: 4, H0670: 4 Pro-176 to Gln-183, L0780: 4, L0731: 4 Arg-204 to Asp-211. H0445: 4, S0436: 4 H0251: 3, H0618: 3 H0087: 3, L0761: 3 L0789: 3, H0762: 3 L0789: 3, L0750: 3 L0789: 3, H0728: 2 H0733: 2, S0474: 2 H0545: 2, H0428: 2 H0649: 2, L0772: 2 |
|   | 2880  |
|   | 187 - 834   |
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|   | 1044618   |
|   | HPDRZ16   |

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|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|------------------|--------------------|---------------------|---------------|--------------|---------------------|--------------|------------------|------------------|--------------------|--------------|------------------|------------------|--------------|------------------|------------------|------------------|------------------|------------------|--------------|------------------|--------------------|-------------------|
|                      | _                   |                     |                     |                     |                     |                    |                  |                    |                     |               |              |                     | _            | <del>,</del>     |                  |                    |              |                  |                  |              |                  |                  |                  |                  |                  |              |                  |                    |                   |
| 2,                   | : 2,                | :2,                 | 2,                  | .2,                 | ζ.;                 | :1,                | 1,               | . 1,               | 1,                  | 1,            | : 1,         | 1,                  | 7: 1,        | . 1,             |                  | ): 1,              | : 1,         | F. 1,            | ): 1,            | : 1,         | ): 1,            | 2: 1,            | 5: 1,            | 3: 1,            | 1,               | .1,          | : 1,             | .1,                | : 1,              |
| .0768: 2, L.0809: 2, | .0788: 2, H0699: 2, | H0539: 2, S0380: 2, | S0406: 2, L0748: 2, | .0756: 2, L0777: 2, | .0755: 2, H0444: 2, | H0650: 1, H0656: 1 | S0298: 1, S0212: | H0661: 1, H0306: 1 | S0420: 1, S0442: 1, | 54: 1, S0360: | 08: 1, H0730 | S0045: 1, S0278: 1, | 92: 1, H0257 | H0250: 1, H0069: | 10427: 1, S0280: | H0156: 1, H0599: 1 | 53: 1, H0581 | 10309: 1, H0544: | 10563: 1, H0569: | 12: 1, H0373 | H0051: 1, H0510: | H0416: 1, H0292: | H0252: 1, H0615: | H0606: 1, H0708: | H0264: 1, S0438: | 40: 1, S0144 | 30422: 1, L0763: | .0638: 1, L0773: 1 | .0648: 1, L.0649: |
| 107                  | L07                 | HOS                 | S04                 | 107                 | L07                 | 90H                | S02              | 90H                | S04                 | 803           | S04          | <u>800</u>          | HOS          | H02              | H04              | H01                | . H02        | H03              | HOS              | 00H          | HOC              | H04              | H02              | 90H              | H02              | S04          | S04              | 907                | 700               |
|                      |                     |                     |                     |                     |                     |                    |                  |                    |                     |               |              |                     |              |                  |                  |                    |              |                  |                  |              |                  |                  |                  |                  |                  |              |                  |                    |                   |
|                      |                     |                     |                     |                     |                     |                    |                  |                    |                     |               |              |                     |              |                  |                  |                    |              |                  |                  |              |                  |                  |                  |                  |                  |              |                  |                    |                   |
|                      |                     |                     |                     |                     |                     |                    |                  | •                  |                     |               |              |                     |              |                  |                  |                    |              |                  |                  |              |                  |                  | ,                |                  |                  | ·            |                  |                    |                   |
| <br>                 |                     |                     |                     |                     |                     |                    | ,                |                    |                     |               | <del></del>  |                     |              | _                |                  | <u> </u>           |              |                  |                  |              |                  |                  |                  |                  | <del></del> _    |              | <del>,,</del>    |                    |                   |
|                      |                     |                     | ·                   | ,                   |                     |                    |                  |                    |                     |               |              |                     |              |                  |                  |                    |              |                  | **               |              | <del></del>      |                  |                  |                  |                  |              | <del></del> -    |                    |                   |
|                      |                     |                     |                     |                     | <u>-</u>            |                    |                  |                    |                     |               |              |                     |              |                  |                  |                    |              |                  |                  |              |                  |                  |                  |                  |                  |              |                  |                    |                   |

| L5568: 1, L0804: 1,<br>L0775: 1, L0375: 1,<br>L0806: 1, L0653: 1,<br>L0787: 1, L0653: 1,<br>L0787: 1, L0665: 1,<br>H0520: 1, S0126: 1,<br>H0689: 1, H0684: 1,<br>H0658: 1, H0696: 1,<br>H0710: 1, H0696: 1,<br>H0739: 1, L0779: 1,<br>L0749: 1, L0779: 1,<br>L0749: 1, L0779: 1,<br>L0758: 1, S0031: 1,<br>L0361: 1, H0542: 1, | H0666: 70, L0766: 3,<br>L0665: 3, H0596: 2,<br>L0794: 2, L0747: 2,<br>H0624: 1, H0656: 1,<br>L0717: 1, H0013: 1,<br>H0318: 1, H0169: 1,<br>L0643: 1, L0645: 1,<br>L0764: 1, L0804: 1,<br>L0657: 1, H0660: 1,<br>L0757: 1, L0588: 1,<br>L0592: 1, L0595: 1 and<br>L0601: 1. | L0745: 23, L0770: 2,<br>S0150: 1, L0761: 1, |
|--|--|---|
|  | Ala-1 to Gln-8,<br>Lys-18 to Arg-23,<br>Lys-56 to Val-64,<br>Lys-129 to Ala-140,<br>Pro-149 to Asn-155.  |   |
|  | 2881.  | 2882  |
|  | 3 - 896  | 701 - 1741                                  |
|  | 706  | 707   |
|  | 1044635  | 1044711                                     |
|  | HVCBC44  | HPIAC22                                     |

| L0788: 1, H0520: 1,<br>L0746: 1, L0747: 1, | AR055: 14 AR060: 6,<br>AR033: 5, AR052: 4,<br>AR061: 4, AR104: 4,<br>AR096: 4, AR089: 4,<br>AR039: 3, AR053: 3<br>H0328: 2, H0124: 2, | L0766: 2, H0171: 1,<br>L0005: 1, S0360: 1,<br>H0329: 1, H0615: 1,<br>H0477: 1, S0440: 1,<br>L0598: 1, H0547: 1,<br>S0126: 1, S0168: 1 and<br>H0595: 1. | AR033: 5, AR060: 4,<br>AR096: 4, AR089: 2,<br>AR053: 1, AR061: 1,<br>AR052: 1, AR055: 0,<br>AR104: 0<br>L0803: 9, L0758: 7,<br>L0766: 4, L0666: 4,<br>L0766: 4, L0666: 4,<br>L0777: 4, L0804: 3,<br>H0144: 3, L0750: 3,<br>L0756: 3, L0752: 3,<br>L0600: 3, S0003: 2,<br>L0455: 2, S0366: 2,   |
|--|---|--|--|
|  |   | <u> </u>   | Asp-8 to Asp-20, AR033: 5, AR060: Phe-43 to Arg-52, AR096: 4, AR089: Ser-102 to Asp-107, AR053: 1, AR061: His-109 to Asp-124, AR052: 1, AR055: Phe-131 to Lys-136, AR104: 0 Pro-143 to Pro-149, L0803: 9, L0758: 7 Lys-189 to Leu-200, L0439: 6, L0740: 5, Asn-305 to Trp-310. L0766: 4, L0666: 4, L0747: 4, L0804: 3, L0756: 3, L0756: 3, L0756: 3, L0756: 3, L0756: 3, L0756: 3, L0756: 2, L0455: 2, S0366: 2, L0456 |
|  | 2883  |  | 2884   |
| •  | 855 - 995   |  | 3 - 959  |
|  | 708   |  | 709  |
|  | 1044741   |  | 1044760  |
| ·  | HSODA53   |  | HE9ML74  |

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|---------------------|----------------------|---------------------|---------------------|--------------------|------------------|------------------|------------------|------------------|-------|------------------|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------|-------------|-------------|----------|-------|----------|---------------|---------------------|------------------|
|                     |                      |                     |                     |                    |                  |                  |                  |                  | ÷     |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  | ·                |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     | •                   |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
| L                   |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
| 9.2,                | 3. 2,                | ?;<br>2,            | %<br>2,             | 1:2,               | ): 1,            | 6: 1,            | 3: 1,            | l: 1,            | F. 1, | 2: 1,            | 7: 1, | 9: 1,            | 1: 1,            | l: 1,            | 0: 1,            | 5: 1,            | 5: 1,            | 3: 1,            | 2: 1,            | <b>)</b> : 1,    | <b>3</b> : 1, | 2: 1,       | #: 1°       | 5: 1,    | I: 1, | 2: 1,    | <b>t</b> : 1, | H0682: 1, H0435: 1, | 0:1,             |
| H0529: 2, L0659: 2, | .0809: 2, L.0665: 2, | H0547: 2, H0672: 2, | H0539: 2, L0748: 2, | .0759: 2, L0591: 2 | .0485: 2, S0040: | H0650: 1, H0656: | S0212: 1, H0663: | S0360: 1, H0351: | 6014  | H0392: 1, H0632: | 042   | .0021: 1, H0599: | H0575: 1, H0581: | S0049: 1, L0471: | H0373: 1, H0510: | S6028: 1, H0615: | H0622: 1, S0036: | F0067: 1, H0413: | F0041: 1, S0002: | S0426: 1, L0369: | 92.0          | L0772:      | 610         | L0775:   | 990   | 079      | 990           | 1043                | H0659: 1, H0660: |
| 2,1                 | 2, L                 | 2, H                | 2, I                | 2, L               | 2, S             | 1, E             | 1, H             | 1, H             | 1, S  | 1, E             | 1, H  | 1, H             | H,               | 1, L             | 1, E             | 1, H             | 1, S             | 1, H             | 1, S             | 1, L             | 1, L          | 1, L        | 1,1         | 1,1      | 1, I  | 1, L     | 1, L          | 1, F                | 1, F             |
| 529:                | 309:                 | 547:                | 539:                | 759:               | 485:             | 650:             | 212:             | 360:             | 222:  | 392:             | 114:  | 321:             | 575:             | 249:             | 373:             | )28:             | 622:             | 367:             | 041:             | 126:             | 0770: 1, ]    | .0761: 1, ] | .0646: 1, ] | ,0774: 1 | 655:  | 547:     | 793:          | 682:                | 659:             |
| 邑                   | <u> </u>             | <u>E</u>            | E<br>E              | 2                  | <u>Š</u>         | Ř                | 80               | 80               | 202   | H                | 10    | <u> </u>         | 出                | 20               | H                | S6(              | 邑                | <u>T</u>         | <u>ľ</u>         | 80<br>S          | <u>2</u>      | <u>2</u>    | <u> </u>    | 2        | Š     | <u> </u> | <u>2</u>      | <u>H</u>            | 9                |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     | •                    |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
| <u> </u>            |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       | -                |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
| $\vdash$            |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       | •                |                  |                  |                  |                  |                  |                  |                  |                  | _             |             |             |          |       | _        |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     | •                   |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  | ,                |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
| -                   |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  | _                |               |             |             |          | _     |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |
|                     |                      |                     |                     |                    |                  |                  |                  |                  |       |                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |               |             |             |          |       |          |               |                     |                  |

| ,                   |                     |                     |                        |                     |                     |                     |                     |                                      |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |
|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|--------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                        | 130500,             | 133200,             | 138140,             | 168360,             | 171760,                              | 171760,             | 176100,             | 176100,             | 178300;             | 230000,             | 255800              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | 1p34                |                     |                     |                     |                                      |                     |                     |                     |                     |                     | 17.                 |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0651: 1, S0013: 1, | H0696: 1, H0436: 1, | .0779: 1, L0608: 1, | S0446: 1 and H0506: 1. | L0747: 8, S0358: 6, | .0766: 5, L0774: 5, | L0750: 5, L0666: 4, | S0406: 4, L0731: 4, | H0341: 3, H0696: 3,                  | L0748: 3, L0758: 3, | H0650: 2, S0356: 2, | S0410: 2, L0717: 2, | H0014: 2, L0667: 2, | L0768: 2, L0775: 2, | L0659: 2, L0783: 2, | H0659: 2, H0648: 2, | S0330: 2, H0539: 2, | L0742: 2, L0439: 2, | L0745: 2, L0757: 2, | L0759: 2, L0592: 2, | L0599: 2, L0595: 2, | H0657: 1, S0212: 1, | H0662: 1, H0125: 1, | S0420: 1, S0354: 1, | S0444: 1, S0132: 1, | S0476: 1, H0370: 1, | L0181: 1, H0069: 1, | H0427: 1, L0021: 1, | H0575: 1, H0318: 1, | S0214: 1, H0039: 1, |
|                     | ш.                  |                     | 5                      | Glu-14 to Gly-20,   | Gly-30 to Ala-37, I | 7,                  | Lys-152 to Tyr-157, | Glu-159 to Thr-173, H0341: 3, H0696: | Leu-177 to Lys-186. |                     |                     | . ==                |                     |                     |                     | <u></u>             |                     |                     |                     |                     |                     |                     |                     | <u> </u>            | <u> </u>            |                     |                     |                     | <u> </u>            |
|                     |                     |                     |                        | 2885                |                     |                     |                     |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | 145 - 855           |                     |                     |                     |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | 710                 |                     |                     |                     |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | 1044762             |                     |                     |                     |                                      |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                        | HPDRB76             |                     |                     |                     |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| ·                |                  | •                | _         |          |              |            | _        |          |        |          |          |           |           |                  |                     |                     |                   |                            |                     |                     | _                   |                      |   |                     |                    |                    |                  |                     |                    |
|------------------|------------------|------------------|-----------|----------|--------------|------------|----------|----------|--------|----------|----------|-----------|-----------|------------------|---------------------|---------------------|-------------------|----------------------------|---------------------|---------------------|---------------------|----------------------|---|---------------------|--------------------|--------------------|------------------|---------------------|--------------------|
|                  |                  |                  |           |          |              |            |          |          |        |          |          |           | -         |                  |                     |                     |                   |                            |                     |                     |                     |                      |   |                     |                    |                    |                  |                     | ı                  |
|                  | •                |                  |           |          |              |            |          |          |        |          |          |           |           |                  |                     |                     |                   |                            |                     |                     |                     |                      |   |                     |                    |                    |                  |                     |                    |
| _                |                  |                  |           |          |              |            |          |          |        | _        |          |           |           |                  |                     |                     |                   |                            |                     | •                   |                     |                      |   | _                   |                    |                    |                  |                     |                    |
|                  |                  |                  |           |          |              |            |          |          |        |          |          |           |           |                  |                     |                     |                   |                            |                     |                     |                     |                      |   |                     |                    |                    |                  |                     |                    |
| _                |                  |                  |           |          |              |            |          |          |        |          |          |           | _         |                  |                     |                     | 6                 | <u></u>                    |                     |                     |                     |                      |   | -                   |                    |                    |                  | _                   | ·                  |
| 1,               | : 1,             | : I,             | Ę.        | 1,       | <del>_</del> | 1;         | Ť,       | 1,       | 1,     | <b>.</b> | 1,       | : 1,      | . T       | 1,               | 1,                  | 94: 1               |                   |                            | 30:                 | 55: 2               | 51: 1               | 94: 8,               | 4,                                      | 33                  | ່ຕ໌                | ີຕ໌                | .3,              | ر                   | 2,                 |
| 0483             | 10616            | [0412            | 1, H0561: | S0440:   | L0763:       | 1.0772:    | L0381:   | L0776:   | L0383: | L0664:   | H0144:   | l, H0658: | I, H0627: | 0744:            | .0753: 1, L0755: 1, | d L02               | 16, AR053:        | 5, AR089:                  | 3, AR060:           | 2, AR055:           | , AR061:            | H0651: 11, L0794: 8, | 0805                                    | 0358:               | 0766:              | .0803: 3, L0665: 3 | 10521            | 0740                | .0756: 3, H0222: 2 |
| : 1, L           | : 1, H           | : 1, H           | : 1, H    |          | : 1, L       | 1,         | $\Xi$    |          |        | Ξ,       | Ę,       |           |           | : 1, L           | : 1, L              | : 1 an              |                   |                            |                     |                     | _                   | 1: 11                | : 5, L                                  | : 4, S              | 3, L               | : 3, L             | : 3, E           | : 3, L              | : 3, H             |
| H0622: 1, L0483: | H0135: 1, H0616: | H0477: 1, H0412: | S0014:    | .0065: 1 | H0633: 1,    | .0761:     | .0764: ] | .0653:   | .0657: | .0647:   | .0665:   | H0723:    | H0660:    | S0027: 1, L0744: | .0753               | .0593: 1 and L0594: | AR052:            | Lys-108 to Asn-118, AR033: | AR096:              | AR104:              | AR039:              | H065                 | Lys-209 to Arg-222, H0038: 5, L0805: 4, | L0758: 4, S0358: 3  | S0476: 3, L0766: 3 | 0803               | H0144: 3, H0521: | .0748: 3, L0740: 3, | 07.56              |
|                  | <u> </u>         | <u>بالر</u>      | S         | <u> </u> | <u> </u>     | <u>н</u> . |          | <u> </u> |        |          | <u> </u> | <u> </u>  | <u> </u>  | <u> </u>         |                     | =                   |                   | 118,                       |                     | 183,                | 195,                | 207,                 | 222, F                                  | 33. I               |                    |                    | <u> </u>         |                     | <u> </u>           |
|                  | •                |                  |           |          |              |            |          |          |        |          |          |           |           |                  |                     |                     | 3lu-6             | Asn-                       | Gly-148 to Ile-154, | Glu-178 to Thr-183, | Ala-185 to Arg-195, | Lys-202 to Lys-207,  | Arg-                                    | Ser-226 to Glu-233. |                    |                    |                  |                     |                    |
|                  |                  |                  | ,         |          |              |            |          |          |        |          | •        |           |           |                  |                     |                     | 2 to (            | 08 to                      | 48 to               | 78 to               | 85 to               | .02 to               | .09 to                                  | 26 to               |                    |                    |                  |                     |                    |
|                  |                  |                  |           |          |              |            |          |          |        |          |          |           |           |                  |                     |                     | Thr-52 to Glu-63, | Lys-1                      | Gly-1               | Glu-1               | Ala-1               | Lys-2                | Lys-2                                   | Ser-2               |                    |                    |                  |                     |                    |
| <u> </u>         |                  |                  | <u></u>   |          |              | _          |          |          |        |          |          |           | -         |                  |                     |                     | 2886              |                            | -                   |                     |                     |                      |   |                     |                    |                    |                  |                     |                    |
| _                |                  | <del></del>      |           |          |              |            |          |          |        |          |          |           |           | _                |                     |                     |                   |                            |                     |                     |                     |                      |   |                     |                    |                    |                  |                     |                    |
|                  |                  |                  |           |          |              |            | •        |          |        |          |          |           |           |                  |                     |                     | 231 - 1070        |                            |                     |                     |                     |                      |   |                     |                    |                    |                  |                     |                    |
|                  |                  |                  |           |          |              |            |          |          |        |          |          |           |           |                  |                     |                     | 231               |                            |                     |                     |                     |                      |   |                     |                    |                    |                  |                     |                    |
|                  |                  |                  |           |          |              |            |          |          |        |          |          |           |           |                  |                     |                     | 711               |                            | •                   |                     | •                   |                      |   |                     |                    |                    |                  |                     |                    |
|                  |                  |                  |           |          |              |            |          |          |        |          |          |           |           |                  |                     |                     | 6                 |                            |                     |                     |                     |                      |   |                     |                    |                    |                  | _                   |                    |
| i                |                  | •                |           |          |              |            |          |          |        |          |          | •         |           |                  |                     |                     | 1044769           |                            |                     |                     |                     |                      |   |                     |                    |                    |                  |                     |                    |
|                  |                  |                  |           |          |              |            |          |          |        |          |          |           |           |                  |                     |                     | 1                 |                            |                     |                     |                     |                      |   |                     |                    |                    |                  |                     |                    |
|                  |                  |                  |           |          |              |            |          | .*       |        |          |          |           |           |                  |                     |                     | 2155              |                            |                     |                     |                     |                      |   |                     |                    |                    |                  |                     |                    |
|                  |                  |                  |           |          |              |            |          |          |        |          |          |           |           |                  |                     |                     | HSYDI55           |                            |                     |                     |                     |                      |   |                     |                    |                    |                  |                     |                    |
|                  |                  |                  |           |          |              |            |          |          |        |          |          |           |           |                  |                     |                     |                   |                            |                     |                     |                     |                      |   |                     |                    |                    |                  |                     |                    |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | -                   |                     |                     | -                   |                     |                     |                     |                     |                     |
| S0420: 2, S0360: 2, | H0551: 2, H0412: 2, | S0440: 2, L0804: 2, | L0789: 2, L0666: 2, | L0747: 2, S0436: 2, | L0599: 2, H0542: 2, | H0223: 1, H0159: 1, | H0717: 1, H0716: 1, | S0282: 1, H0580: 1, | S0046: 1, H0411: 1, | H0486: 1, H0013: 1, | H0596: 1, L0738: 1, | H0544: 1, H0046: 1, | L0471: 1, H0014: 1, | H0083: 1, S0003: 1, | H0553: 1, L0055: 1, | H0124: 1, H0591: 1, | H0616: 1, H0059: 1, | H0494: 1, S0294: 1, | H0529: 1, L0770: 1, | L0769: 1, L0800: 1, | L0644: 1, L0764: 1, | L0771: 1, L0662: 1, | L0364: 1, L0653: 1, | L0776: 1, L0655: 1, | L0659: 1, L0526: 1, | L0382: 1, S0148: 1, | H0693: 1, S0328: 1, | S0152: 1, H0436: 1, | H0631: 1, S3014: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     | -                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>-</u>            |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |

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|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|------------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                        |           |                        |                       | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| S0027: 1, L0439: 1, | L0749: 1, L0779: 1, | L0777: 1, L0731: 1, | L0757: 1, H0444: 1, | H0445: 1, S0026: 1, | S0242: 1, S0194: 1 and | H0423: 1. | H0435: 1 and S0424: 1. | L0740: 20, L0754: 14, | L0742: 9, L0771: 7, | L0748: 7, L0749: 7, | L0752: 6, S0422: 5, | L0770: 5, H0585: 4, | S0360: 4, H0581: 4, | L0769: 4, L0775: 4, | S0374: 4, H0521: 4, | L0747: 4, L0779: 4, | L0753: 4, L0758: 4, | H0295: 3, S0278: 3, | S0440: 3, S0002: 3, | L0649: 3, L0806: 3, | S0126: 3, S0380: 3, | S0434: 3, S0436: 3, | S0026: 3, H0170: 2, | H0661: 2, S0358: 2, | S0045: 2, H0370: 2, | H0442: 2, H0318: 2, | S0474: 2, H0687: 2, | S0003: 2, H0551: 2, | S0438: 2, H0509: 2, |
|                     |                     |                     |                     |                     |                        |           |                        |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | 2887                   | 2888                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | 49 - 558               | 69 - 575              |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | ,                      |           | 712                    | 713                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     | _                   |                     |
|                     |                     |                     |                     | •                   |                        | • !       | 1044821                | 1044893               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |
|                     |                     |                     |                     |                     |                        |           | HOGCI31                | HNOKX86               |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -,                  |                     |                     |                     |                     |                     |

|                     |                     |                     |                     |                     |                      |                      |                    |                     |                     | •                  |                     |                       |                  |                  |                  |              |                  | _                |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |
|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|--------------------|---------------------|---------------------|--------------------|---------------------|-----------------------|------------------|------------------|------------------|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|------------------|------------------|------------------|------------------|------------------|
|                     |                     |                     |                     |                     |                      |                      |                    |                     |                     |                    |                     |                       |                  |                  |                  |              |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  | •                |                  |                  |
|                     |                     |                     | •                   |                     |                      |                      |                    |                     |                     |                    |                     |                       | _                |                  |                  |              | <u></u>          |                  | _                | _                |                  |                  |                  |                    |                  |                  |                  |                  |                  |
| 764: 2,             | 766: 2,             | 559: 2,             | 014: 2,             | 751: 2,             | 755: 2,              | 588: 2,              | 422: 2,            | 556: 1,             | 294: 1,             | 656: 1,            | 341: 1,             | 418: 1,               | 354: 1,          | 580: 1,          | 733: 1,          | , H0441: 1,  | 537: 1,          | 013: 1,          | 309: 1,          | 530: 1,          | 046: 1,          | 123: 1,          | 51: 1,           | 266: 1,            | 622: 1,          | 674: 1,          | 1316: 1,         | 038: 1,          | 366: 1,          |
| S0344: 2, L0764: 2, | .0662: 2, L0766: 2, | .0776: 2, L0659: 2, | H0659: 2, S3014: 2, | 30027: 2, L0751: 2, | .0756: 2, L.0755: 2, | .0731: 2, L.0588: 2, | 0599: 2, H0422: 2, | H0265: 1, H0556: 1, | S0040: 1, H0294: 1, | S0218: 1, H0656: 1 | S0116: 1, H0341: 1, | 2: 1, SO <sub>2</sub> | 30356: 1, S0354: | 50376: 1, H0580: | H0728: 1, H0733: | 10639: 1, HC | H0431: 1, H0537: | H0330: 1, H0013: | H0052: 1, H0309: | H0231: 1, H0530: | 10544: 1, H0046: | H0009: 1, H0123: | S0388: 1, S0051: | H0355: 1, H0266: 1 | H0615: 1, H0622: | H0644: 1, H0674: | H0124: 1, H0316: | H0135: 1, H0038: | H0372: 1, H0366: |
| S034                | F066                | 1707                | H065                | S002,               | 1075                 | 1.073                | 1059               | H026                | S004                | S021               | S011                | S021                  | S035             | S037             | H072             | H063         | H043             | H033             | H005             | H023             | H054             | H000             | 8038             | H035               | H061             | H064             | H012             | H013             | H037             |
|                     |                     |                     |                     |                     |                      |                      |                    |                     |                     |                    |                     |                       |                  |                  |                  |              |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |
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|                     |                     |                     |                     |                     |                      |                      |                    |                     |                     |                    |                     |                       |                  | <u></u>          |                  |              | _                |                  | _                |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     | <del>.</del>        |                      |                      |                    |                     |                     |                    |                     |                       |                  |                  | ,                |              |                  |                  |                  |                  | <del></del>      |                  |                  | <del></del>        |                  |                  |                  |                  |                  |
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|                     | -                   |                     |                     | _                   | _                    |                      |                    |                     |                     |                    |                     |                       | -                |                  |                  | -            |                  |                  |                  |                  | _                |                  |                  |                    | •                |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                      |                      |                    |                     |                     |                    | •                   |                       |                  |                  |                  |              |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     | _                    |                      |                    |                     |                     |                    |                     |                       |                  |                  | -                |              |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  | ,                |                  |                  |
|                     |                     |                     |                     |                     |                      |                      |                    |                     |                     |                    |                     |                       |                  |                  |                  |              |                  |                  |                  |                  | ٠                |                  |                  |                    |                  |                  |                  |                  |                  |
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|  |                     |  |                     |                     | ,                   | , | •                   |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                   |                       |                     |   |   |
| S0150: 1, H0646: 1,<br>S0144: 1, S0142: 1, | H0529: 1, L0762: 1, | L0763: 1, L0371: 1,<br>L0796: 1, L0637: 1, | L0521: 1, L0768: 1, | L0805: 1, L0655: 1, | L0515: 1, L0526: 1, |   | L0788: 1, L0792: 1, | L0666: 1, L0663: 1, | L0665: 1, H0144: 1, | L0438: 1, H0690: 1, | H0683: 1, H0684: 1, | H0670: 1, S0330: 1, | S0152: 1, H0704: 1, | H0134: 1, S0406: 1, | H0478: 1, H0727: 1, | S0206: 1, L0591: 1, | H0136: 1, H0216: 1, | S0196: 1, H0542: 1, | H0543: 1, H0423: 1, | L0697: 1, S0424: 1 and | S0384: 1. | AR039: 19, AR053: | 13, AR096: 10, AR052: | 9, AR089: 8, AR104: |   | 9 |
|  |                     |  |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | !         | Thr-19 to Ala-26. |                       |                     | : |   |
|  |                     | •  |                     |                     |                     | 1 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2889              |                       |                     |   |   |
|  | -                   |  |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     | 7                   |                     |                     |                     |                     |                        |           | 2112 - 577        |                       |                     |   |   |
|  |                     |  |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 714               |                       |                     |   |   |
|  |                     |  |                     |                     |                     | í | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | :         | 1045117           |                       |                     |   |   |
|  |                     |  |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HTPHG81           |                       |                     |   |   |

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|                     |                     | <u> </u>               |           |                      |                     | _                   |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0553: 2, S0282: 1, | S0049: 1, H0052: 1, | H0622: 1, H0040: 1 and | S0406: 1. | S0358: 17, S0360: 7, | L0604: 7, L0769: 5, | L0497: 5, L0655: 5, | L0590: 4, H0543: 4, | L0622: 3, L0499: 3, | L0775: 3, H0659: 3, | H0670: 3, L0757: 3, | L0588: 3, L0601: 3, | S0276: 3, S0114: 2, | H0657: 2, S0007: 2, | H0586: 2, T0109: 2, | F0048: 2, H0327: 2, | L0471: 2, H0494: 2, | L0770: 2, L0662: 2, | L0527: 2, L0513: 2, | L0530: 2, H0144: 2, | H0689: 2, H0672: 2, | H0521: 2, L0750: 2, | L0755: 2, L0731: 2, | L0596; 2, L0599: 2, | L0608: 2, L0440: 1, | F0049: 1, H0341: 1, | H0483: 1, H0125: 1, | H0580: 1, S0045: 1, | H0351: 1, H0411: 1, | S0222: 1, L0623: 1, |
|                     |                     |                        |           | Ser-21 to Pro-28,    | Pro-36 to Ser-63,   | Gln-67 to Thr-83,   | Arg-88 to Thr-94,   | 1,                  |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
|                     |                     |                        |           | 2890                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        |           | 34 - 444             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        |           | 715                  |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | •                   |                        |           | 1045379              |                     |                     |                     |                     | •                   |                     |                     |                     | ٠                   |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        | ·         | HPCTV49              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|----------------|-----------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|------------------|------------------|------------------|------------------|------------------|-----------|-----------|-------------|-------------|------------------|-------------|-------------|------------|----------------|------------------|------------------|------------------|------------------|-----------|------------------|-------------|
|                |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
|                |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  | ٠                |           |                  |             |
|                |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  | •         |           |             |             |                  | —           | _           |            |                |                  |                  |                  |                  |           |                  |             |
|                |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
|                |           |                  |                  |                  |                  |                  | •                |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
|                | •         |                  |                  | •                | _                | •                |                  |           |                  | •                | ·                |                  |                  |           |           |             |             |                  | •           |             |            |                |                  |                  | . •              |                  | _         |                  |             |
| 39. 1          | 30: 1,    | 82: 1            | 81: 1            | 09: 1            | 87: 1            | 15: 1            | 68: 1            | 16: 1     | 36: 1            | 67:1             | 25: 1            | 33: 1            | 22: 1            | 62: 1,    | 39: 1     | 46: 1,      | L0765: 1,   | 67: 1,           | .0381: 1    | L0498: 1    | .0776: 1   | 82: 1          | 32: 1            | 83: 1            | 551: 1           | 522: 1           | 27: 1,    | 52: 1            | 92: 1       |
| H0486-1 T0039- | 1, S0280: | H0599: 1, T0082: | H0274: 1, H0581: | H0251: 1, H0009: | H0266: 1, H0687: | H0328: 1, H0615: | H0428: 1, S0368: | 1, H0316: | H0598: 1, S0036: | H0038: 1, T0067: | H0560: 1, H0625: | H0130: 1, H0633: | H0647: 1, S0422: | L0762:    | ,L0639:   | 706         | 107         | .0363: 1, L0767: |             | 3           |            | 1, L0782:      | .0543: 1, L0532: | .0666: 1, H0683: | H0648: 1, H0651: | H0525: 1, H0522: | 1, S0027: | .0777: 1, L0752: | , L0592:    |
| 86.1           | .0586: 1, | 99: 1            | 74: 1            | 51:1             | 66: 1            | 28: 1            | 28: 1            | .0055: 1, | 98: 1            | 38: 1            | 60: 1            | 30: 1            | 47:1             | .0520: 1, | .0500: 1, | .0372: 1, I | 0645: 1,    | 63: 1,           | .0768: 1, 1 | .0550: 1, ] | .0774: 1   | L0518: 1       | 43: 1,           | 66: 1            | 48: 1            | 25: 1            | 12: 1,    | 77: 1            | .0759: 1, I |
| H04            | 105       | H05              | H02              | H02              | H02              | H03              | H04              | 007       | H05              | 00H              | H05              | H01              | H06              | 105       | 105       | <u>103</u>  | <u>1</u> 26 | <u>1</u> 03      | <u> </u>    | 105         | <u>L07</u> | 105            | 105              | 700              | 90H              | H05              | S3012:    | 107              | 107         |
|                |           | 1                |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
|                |           |                  |                  |                  |                  | ,                |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
|                |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  | •         |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
|                |           |                  | •.               |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
|                |           |                  |                  | _                |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             | <del></del>      | •           |             |            |                |                  |                  |                  |                  |           |                  |             |
| L              |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  | _                |           |                  |             |
|                |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
|                |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
|                |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
| L              |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
|                |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            | •              |                  |                  |                  |                  |           |                  |             |
|                |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
| $\vdash$       |           |                  |                  |                  | —                |                  |                  |           |                  |                  |                  | •                |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
|                |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  | •                |           |                  |             |
|                |           |                  |                  |                  |                  |                  |                  |           |                  |                  |                  |                  |                  |           |           |             |             |                  |             |             |            |                |                  |                  |                  |                  |           |                  |             |
|                |           |                  |                  |                  |                  |                  | _                |           |                  |                  |                  | _                |                  |           |           |             |             |                  |             |             | _          | <del>, -</del> |                  |                  |                  |                  |           |                  |             |

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|---|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------|---------|-----------------------|-------------------|-------------------|-----------------------|-----------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|
|   | 103050,   | 103050,             | 124030,             | 124030,             | 138981,             | 182380,             | 188826,             | 190040, | 190040, | 130040                | ,                 |                   |                       | •                     |                    |                     |                     |                     |                     |                     |                     |                     | ٠                    |                     |                     |                     |                     |
|   | 22q13.1   |                     |                     |                     |                     |                     |                     |         |         |                       |                   |                   | ,                     |                       |                    | ÷                   |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
| L0361: 1, S0026: 1,<br>H0667: 1 and H0542: 1. |           |                     |                     |                     |                     |                     |                     |         |         | L0731: 21. L0747: 17. | 0776 16 1 0748 14 | 0777:14 1 0752:13 | 0755: 13, 1,0769: 11. | .0750: 11, L0766: 10, | 0806: 8, L0770: 7, | H0556: 5, L0599: 5, | .0774: 4, L0756: 4, | .0779: 4, L0753: 4, | H0341: 3, L0761: 3, | .0764: 3, L0771: 3, | .0809: 3, H0144: 3, | .0743: 3, L0754: 3, | .,0757: 3, H0265: 2, | S0134: 2, H0306: 2, | H0402: 2, H0580: 2, | H0393: 2, H0369: 2, | H0441: 2, H0013: 2, |
|   | _         | Lys-155 to Gln-164, | Tyr-168 to Leu-174, | Glu-190 to Leu-197, | Pro-213 to Arg-224, | Met-226 to Ser-241, | Pro-247 to Ser-255. |         |         | Gln-12 to His-23.     | <u> </u>          |                   |                       |                       |                    | H                   |                     | F=1                 |                     |                     |                     |                     |                      | <u> </u>            |                     | <del></del>         | 1                   |
|   | 2891      |                     |                     |                     |                     |                     |                     |         |         | 2892                  |                   |                   |                       |                       |                    |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
|   | 121 - 999 |                     |                     |                     |                     |                     |                     |         |         | 5155 -                | 3530              |                   |                       |                       |                    |                     |                     |                     | ,                   |                     |                     | ,                   |                      |                     |                     |                     |                     |
|   | 716       |                     |                     |                     |                     |                     |                     |         |         | 717                   |                   |                   |                       |                       |                    |                     |                     |                     |                     |                     |                     | _                   |                      |                     |                     |                     |                     |
|   | 1045464   |                     |                     |                     |                     |                     |                     |         |         | 1045500               |                   |                   |                       |                       |                    |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
|   | ннсрк68   |                     |                     |                     |                     |                     |                     |         |         | HNOKW38               |                   |                   |                       |                       |                    |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |

| _                   |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|---------------------|----------------------|---------------------|-------------|-----------------|------------|------------------|-------------|--------------------|-------|----------|--------------------|--------|--------------|-----------|----------|-----------|------------------|--------------|----------|----------|--------------|-----------|--------------------|------------------|------------------|------------------|--------------|------------------|-----------|
|                     |                      | •                   |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          | ٠            |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           | _                  |                  | _                |                  |              |                  |           |
| ų,                  | จ์ (                 | .Ý                  | 7,          | <b>બ</b>        | બ          | ų                | 2,          | તં                 | 1,    | ٦,       | 1,                 | ÷      | <del>-</del> | Ļ         | 1,       | Τ,        | <del>-</del>     | <del>,</del> | 1,       | 1,       | <del>,</del> | <u>,</u>  | 1,                 | Ť                | <u>–</u>         | <del>-</del>     | <del>_</del> | 1,               | 7         |
| 051:                | 200                  | 35:                 | L0662: 2,   | L0794: 2,       | L0775: 2,  | 521:             | 587:        | L0603: 2,          | 218:  | )254:    | 046:               | )411:  | 1, H0370: 1  | 1, H0574: | H0036:   | l, H0150: | 3399             | 179          | H0615: 1 | 3006:    | H0166: ]     | 1, H0674: | 036:               | )634             | 3560             | 3695             | L0640:       | 641:             | 767:      |
| 2, H(               | , i                  | 2, H(               | 2, LO       | 2, <sup>2</sup> | 2,10       | 2, HC            | 2, 1.0      | 2, 1.0             | 1, 50 | 1, H(    | 1, S0              | 1, H(  | 1, H(        | 1, H(     | •        | 1, H(     | 1, H(            | •            | •        | _:       |              | 1, H(     | 1, SO              | 1, H(            | 1, H(            | 1, H(            |              | 1, 10            | 1, L0767: |
| H0024: 2, H0051: 2, | TICOO1: 4, TICOO1: 4 | 10644: 2, H0135: 2, | ,0763: 2, 1 | .0768: 2, 1     | 0803: 2, 1 | .0783: 2, H0521: | ,0759: 2, ] | L0591: 2, L0603: 2 | 114:  | 483:     | H0663: 1, S0046: 1 | H0440: | H0550:       | H0333: 1  | r0039:   | H0545: 1  | H0083: 1, H0399: | 355:         | H0271: 1 | H0622: 1 | H0553:       | H0169: 1  | .0456: 1, S0036: 1 | H0040: 1, H0634: | H0100: 1, H0560: | H0633: 1, H0695: | .0762: 1,    | .0796: 1, L0641: | 0648: 1   |
| H :                 |                      | 을 .                 | 2           | 9               | <u> </u>   | 3                | 2           | 2                  | 80    | <u>H</u> | ឣ                  | 丑      | H<br>H       | <u>H</u>  | <u>Ū</u> | <u></u>   | 물                | 요            | 丑        | 田        | <u>H</u>     | 品         | 2                  | H                | 呈                | 윤                | Ď            | <u>2</u>         | Ñ         |
|                     |                      |                     |             |                 |            |                  | •           |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           | •                  |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  | •                |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          | ·         |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     | _                    |                     |             |                 |            |                  |             |                    |       |          |                    |        | .=           |           |          |           |                  |              | _        |          |              |           |                    |                  |                  |                  |              |                  | _         |
|                     |                      |                     |             |                 |            |                  |             | ,                  |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            | •                |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
| —.                  |                      |                     |             | _               |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  | _         |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              | ,         |                    |                  |                  | •                |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              |          |          |              |           |                    |                  |                  |                  |              |                  |           |
|                     |                      |                     |             |                 |            |                  |             |                    |       |          |                    |        |              |           |          |           |                  |              | <u>.</u> |          |              |           |                    |                  |                  |                  |              |                  |           |

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|  |  |
| L0805: 1, L0606: 1,<br>L0657: 1, L0659: 1,<br>L0528: 1, L0532: 1,<br>L0664: 1, L0665: 1,<br>S0330: 1, S0027: 1,<br>L0740: 1, L0745: 1,<br>L0749: 1, L0758: 1,<br>H0445: 1, L0608: 1,<br>L0595: 1, L0601: 1,<br>S0242: 1, S0276: 1,<br>H0542: 1, H0543: 1,<br>H0423: 1, H0506: 1 and<br>L0600: 1. | L0748: 13, L0754: 5,<br>L0746: 5, S0356: 4,<br>H0052: 4, L0803: 4,<br>L0745: 4, L0749: 4,<br>L0731: 4, S0360: 3,<br>H0032: 3, H0646: 3,<br>L0766: 3, L0438: 3,<br>L0777: 3, S0222: 2,<br>H0581: 2, H0014: 2,<br>S0003: 2, H0591: 2,<br>L0775: 2, L0664: 2,<br>H0435: 2, L0743: 2,<br>L0485: 2, H0542: 2,<br>H0543: 2, L0600: 2,<br>S6024: 1, S0376: 1, |
|  | Glu-98 to Asp-109,<br>Ser-121 to Ile-128.  |
|  | 2893   |
|  | 2335   |
|  | 718  |
|  | 1045842  |
|  | HHFUN47  |

|                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                                       |                     |                     | _                   |                     |                     |                     | _                   |                        |           |                     |                     |                     |                     |          |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|----------|---------------------|
| -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     | •                   |                     |                     |                     |                     |                     |                        |           | 116860,             | 126650,             | 126650,             | 129900,             | 133170,  | 154276,             |
|                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     | •                   |                     |                     |                     |                     |                        |           | 7q21-q22            | i<br>I              |                     |                     |          |                     |
| H0492: 1, H0486: 1, | F0082: 1, H0004: 1, | S0010: 1, H0242: 1, | L0471: 1, H0510: 1, | H0039: 1, H0622: 1, | H0553: 1, H0090: 1, | H0038: 1, H0040: 1, | H0616: 1, H0059: 1, | H0654: 1, H0538: 1, | S0426: 1, L0637: 1, | L0761: 1, L0667: 1, | L0794: 1, L0560: 1, | LQ804: 1, L0776: 1, | L0666: 1, H0144: 1, | S0374: 1, H0519: 1,                     | H0593: 1, S0122: 1, | H0684: 1, H0666: 1, | S0330: 1, H0539: 1, | S0152: 1, H0521: 1, | H0522: 1, L0747: 1, | L0779: 1, L0758: 1, | L0590: 1, L0591: 1, | S0192: 1, S0194: 1 and | H0422: 1. | AR104: 6, AR033: 5, | AR053: 5, AR089: 4, | AR096: 3, AR060: 3, | AR061: 1, AR055: 0, | AR039: 0 | H0144: 2, S0126: 2, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                        |           | Ala-3 to Gly-19,    | Arg-29 to Gly-34,   | Gly-41 to Pro-51,   | ~î                  | <u>.</u> | ı                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                        |           | 2894                |                     |                     |                     |          |                     |
|                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |   |                     | <del></del>         |                     |                     |                     |                     | -                   | -                      |           | 1 - 504             |                     |                     |                     |          |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                        |           | 719                 |                     |                     |                     |          |                     |
|                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     | *************************************** |                     |                     | W- <u>-</u>         |                     |                     |                     |                     |                        |           | 1045995             |                     |                     | -                   | •        |                     |
|                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                        |           | HNTSV18             |                     |                     |                     |          |                     |

| Γ                   |                     |                     |                     |                        |        |                       |   |                     |                     |                     |                     |                     | _                   |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | $\neg$              |
|---------------------|---------------------|---------------------|---------------------|------------------------|--------|-----------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 173360,             | 173360,             | 602136,             | 602136,             | 602136,                | 602447 | 10p11.2-p12600964,    | 602026                                  |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |
| S0212: 1, S0046: 1, | H0587: 1, H0024: 1, | S0036: 1, H0652: 1, | L0649: 1, H0547: 1, | H0658: 1 and L0439: 1. |        | S0412: 19, L0803: 10, |   | L0770: 6, L0766: 6, | L0663: 6, L0754: 6, | S0406: 5, L0752: 5, | S0222: 4, L0771: 4, | H0144: 4, L0439: 4, | L0731: 4, S0444: 3, | L0717: 3, H0328: 3, | L0662: 3, L0655: 3, | S0330: 3, H0521: 3, | L0748: 3, L0759: 3, | H0556: 2, S0356: 2, | S0354: 2, H0676: 2, | S0408: 2, H0013: 2, | H0575: 2, H0050: 2, | H0266: 2, S0214: 2, | H0428: 2, H0031: 2, | H0674: 2, T0067: 2, | L0764: 2, L0806: 2, | L0805: 2, L0809: 2, | L0666: 2, L0664: 2, | L0665: 2, H0547: 2, | H0435: 2, H0659: 2, |
|                     |                     |                     |                     | <u></u>                |        | Ala-43 to Thr-51,     | Gly-104 to Arg-112. S0003: 9, S0414: 6, | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        |        | 2895                  |   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |
|                     |                     | -                   |                     |                        |        | 2564 -                | 1749                                    |                     |                     | _                   |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        |        | 720                   |   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | `                   |                        |        | 1046137               |   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        |        | HWHGU08               |   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |

| Γ                   |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  | <u>.</u>         |  |                  |                  | -                |                  |                  |                  |                  |                  |                  |                    |                  |                  | _                |                  |                     |             |
|---------------------|---------------------|---------------------|----------------------|---------------------|------------------|-------------|--------------------|--------------------|--------|--------------------|------------------|------------------|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|------------------|------------------|------------------|------------------|---------------------|-------------|
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
| _                   |                     |                     |                      |                     |                  |             |                    |                    | _      |                    |                  |                  |  |                  | _                |                  |                  |                  |                  |                  |                  |                  | -                  |                  |                  |                  |                  |                     |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
| 2,                  | 8:2,                | 7:2,                | 8: 2,                | 3: 2,               | 8: 1,            | 6: 1,       | 1:1,               | 8: I,              | ): 1,  | 3: 1,              | 5: 1,            | 7:1,             | 6: 1,  | 0: 1,            | 2: 1,            | 7: 1,            | 2: 1,            | I: 1,            | 2: 1,            | 8: 1,            | 2: 1,            | 3: 1,            | 8: 1,              | 4: 1,            | )1: 1,           | 4: 1,            | 2: 1,            | 5: 1,               | 0:1,        |
| H0670: 2, H0660: 2, | H0539: 2, S0028: 2, | .0779: 2, L0777: 2, | .0780: 2, L.0588: 2, | .0595: 2, H0423: 2, | 10685: 1, S0218: | , H0656:    | H0341: 1, S0001: 1 | H0125: 1, S0418: 1 | 3036   | 30046: 1, S0278: 1 | H0437: 1, H0455: | HO586: 1, H0587: | H0574: 1, H0486:                             | H0156: 1, S0010: | H0196: 1, H0052: | 70110: 1, H0597: | 10046: 1, H0572: | H0123: 1, L0471: | 10015: 1, S0362: | .0163: 1, S6028: | H0687: 1, H0622: | 70023: 1, L0483: | H0553: 1, H0628: 1 | 10032: 1, S0364: | H0708: 1, H0591: | 10040: 1, H0634: | H0551: 1, H0412: | JO475: 1, S0015: 1, | 1, S0440:   |
| 2,7                 | 2,                  | ): 2, I             | ): 2, 1              | 5: 2, I             | 5: 1,            | ): 1, ]     | l: 1,              | 5: 1,              | . 1, 5 | 3: 1, 5            | 7:1,             | 5: 1, ]          | 4: 1, ]                                      | 5: 1, 3          | 5: 1, ]          | ): 1, 1          | 5: 1, ]          | 3:1,]            | 5: 1,            | 3: 1, 5          | 7: 1, ]          | 3: 1, 1          | 3: 1,              | 2: 1,            | . 1.<br>3: 1.]   | J. 1.            | 1: 1,            | 5: 1,               | 5: 1,       |
| 1067                | 10539               | 5 <i>LL</i> 0       | 0780                 | 3650                | 1068             | H0650: 1    | 1034               | 1012               | 0420   | 9                  | 1043             | 1058             | 1057 <sup>2</sup>                            | 1015             | 1019             | 70110            | 1004             | 1012             | 1001             | .0163            | 1068             | 7002             | 1055               | 1003             | 1070E            | 1004             | 1055             | 0475                | H0625:      |
|                     | <u> </u>            | ᅩ                   | <u> </u>             | <u> </u>            | <u>;4</u> ;      | <u>نالن</u> | <u>الجاز</u>       | <u> </u>           | S      | S                  | <u>14</u>        | <u> </u>         | <u> </u>                                     | <del>  </del>    | <u> </u>         | Н                | <u> </u>         | <u>,44</u>       | والمار           | <u> </u>         | بلر              |                  | <u></u>            | <u> </u>         | Щ.               | <del>, 114</del> | <u> </u>         | <u> </u>            | <u>, 11</u> |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
| -                   |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  | <u>.                                    </u> |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  | -                |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  | -                   |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  | -                |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
| L                   |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  | _                  |                  |                  |                  | . —              |                     |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
| r                   |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  | _                |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     | -           |
|                     |                     |                     |                      | ٠                   |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  | •                | ٠                |                    |                  |                  |                  |                  |                     |             |
| H                   |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  | —                |                  | _                  |                  |                  |                  |                  |                     |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                  |                  |                  |                  |                     |             |
|                     |                     |                     |                      |                     |                  |             |                    |                    |        |                    |                  |                  |  |                  |                  |                  |                  |                  |                  |                  |                  | _                |                    |                  |                  |                  |                  |                     |             |

|   | 120435,<br>120435,<br>126600,<br>135300,<br>136435,<br>152790,<br>152790,<br>157170,<br>182601,<br>278300,   |
|---|--|
|   | 2p22-p21   |
| S0422: 1, S0426: 1,<br>H0529: 1, L0762: 1,<br>L0769: 1, L0762: 1,<br>L0771: 1, L0641: 1,<br>L0772: 1, L0643: 1,<br>L0773: 1, L0804: 1,<br>L0775: 1, L0804: 1,<br>L0775: 1, L0653: 1,<br>L0775: 1, L0783: 1,<br>H0659: 1, L0783: 1,<br>H0696: 1, S0206: 1,<br>L0775: 1, L0749: 1,<br>L0755: 1, L0749: 1,<br>L0755: 1, L0749: 1,<br>L0755: 1, H0668: 1,<br>H0647: 1, R0436: 1,<br>S0026: 1, H0668: 1,<br>S0026: 1, H0668: 1,<br>S0026: 1, H0668: 1, | AR089: 30, AR060:<br>18, AR039: 17, AR033:<br>16, AR096: 16, AR104:<br>13, AR055: 12, AR052:<br>12, AR053: 8, AR061:<br>8<br>L0731: 13, L0748: 11,<br>L0747: 10, L0740: 6,<br>L0763: 5, L0750: 5,<br>L0770: 4, L0766: 4, |
|   | Val-3 to Gly-14,<br>Ser-65 to Asn-70.  |
|   | 2896   |
|   | 870 - 508  |
|   | 721  |
|   | 1046177  |
|   | HE6CR19  |

| 601071,             | 601771,             | 602134              |                     | ,                   |                     |                     | •                   |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|
| L0555: 4, L0776: 4, | S0358: 3, H0100: 3, | S0440: 3, L0375: 3, | L0664: 3, L0665: 3, | L0756: 3, L0752: 3, | T0049: 2, S0442: 2, | S0045: 2, L0471: 2, | T0006: 2, H0413: 2, | L0769: 2, L0774: 2, | L0775: 2, L0655: 2, | L0659: 2, L0382: 2, | L0666: 2, L0663: 2, | H0658: 2, S0328: 2, | S0406: 2, L0439: 2, | L0755: 2, L0588: 2, | L0591: 2, L0362: 2, | S0116: 1, H0483: 1, | S0360: 1, S0132: 1, | H0393: 1, S0278: 1, | H0586: 1, L0021: 1, | H0052: 1, H0251: 1, | H0544: 1, H0041: 1, | H0266: 1, S0214: 1, | T0023: 1, H0641: 1, | L0772: 1, L0773: 1, | L0662: 1, L0386: 1, | L0388: 1, L0652: 1, | L0653: 1, L0656: 1, | <br>L0809: 1, S0126: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | · · ·               |                     | -                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | _                   | <u></u>             |                     |                         |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | -                   |                     |                     |                     |                     |                         |
|                     | -                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                         |

|  |   |  |                     | •                   |                     |   |                     |                     |                     |  |                     |                     |                     |                     | _                   |                     |                     |
|--|---|--|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  | 104770,<br>107300,<br>107670,                                     | 110700,<br>131210,                         | 134638,             | 136132,             | 145001,             | 146740,<br>146740.                        | 146740,             | 146790,             | 152445,             | 159001,                                      | 173610,             | 174000,             | 176310,             | 179755,             | 182860,             | 182860,             | 182860,             |
|  | 1q21-q23  |  |                     |                     |                     |   |                     |                     | ·                   |  |                     |                     |                     | •                   |                     |                     |                     |
| H0659: 1, S0330: 1,<br>S0380: 1, L0602: 1,<br>H0710: 1, S0027: 1,<br>L0753: 1, L0757: 1,<br>L0759: 1, L0480: 1,<br>H0665: 1, S0276: 1,<br>H0422: 1 and S0384: 1. | L0747: 7, H0144: 6,<br>L0748: 6, L0758: 6,<br>L0666: 5, L0750: 5, | L0755: 5, S0360: 4,<br>L0646: 4, L0375: 4, | L0776: 4, S0358: 3, | H0087: 3, L0761: 3, | L0764: 3, L0775: 3, | L0513: 3, L0809: 3,<br>10532: 3, L0565: 3 | L0751: 3, L0752: 3, | L0731: 3, L0588: 3, | H0170: 2, T0049: 2, | 501 16: 2, F10233: 2,<br>S0420: 2, S0280: 2, | L0471: 2, H0620: 2, | H0083: 2, L0483: 2, | H0617: 2, L0769: 2, | L0637: 2, L0643: 2, | L0662: 2, L0497: 2, | L0774: 2, L0655: 2, | L0657: 2, L0783: 2, |
|  | Glu-12 to Phe-17,<br>Ser-44 to Asn-57.                            |  |                     |                     |                     |   |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |
| ·  | 2897  |  |                     |                     |                     |   |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |
|  | 3 - 173   |  |                     |                     |                     |   |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |
|  | 722   |  |                     |                     |                     |   |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |
|  | 1046856   |  |                     | - <del>-</del>      |                     |   |                     |                     |                     | •  |                     |                     | •                   |                     |                     |                     |                     |
|  | HE9E382   |  |                     |                     |                     |   |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |

| 186780,             | 191315,             | 227400,             | 227400,             | 230800,             | 230800,             | 266200,             | 600897,             | 601105,             | 601412,             | 601652,             | 602491              |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| H0666: 2, L0749: 2, | L0361: 2, S0114: 1, | S0134: 1, S0218: 1, | H0662: 1, H0241: 1, | S0356: 1, L0717: 1, | H0333: 1, L0623: 1, | H0486: 1, H0270: 1, | H0069: 1, H0318: 1, | H0581: 1, H0597: 1, | H0546: 1, H0009: 1, | H0178: 1, H0123: 1, | S0051: 1, H0594: 1, | H0271: 1, H0188: 1, | H0615: 1, H0553: 1, | H0181: 1, H0032: 1, | H0169: 1, H0163: 1, | H0038: 1, H0063: 1, | H0164: 1, H0059: 1, | H0117: 1, H0100: 1, | L0351: 1, H0509: 1, | S0144: 1, S0142: 1, | L0598: 1, L0369: 1, | L0520: 1, L0762: 1, | L0640: 1, L0763: 1, | L0371: 1, L0641: 1, | L0642: 1, L0374: 1, | L0771: 1, L0648: 1, | L0363: 1, L0768: 1, | L0499: 1, L0378: 1, |
|                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     | <u> </u>            |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | · ·                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |

|                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                        |                        | 106165,                    | 117700,               | 117700,               | 150210,               | 169600,                | 180380,              | 180380,             | 180380,             | 190000,             | 203500,             | 232050,             |
|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|------------------------|------------------------|----------------------------|-----------------------|-----------------------|-----------------------|------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| .0806: 1, L.0653: 1, | .0558: 1, L0659: 1, | .0517: 1, L0526: 1, | .0384: 1, L0529: 1, | .0543: 1, L0647: 1, | .0664: 1, L0665: 1, | S0428: 1, H0520: 1, | H0690: 1, H0684: 1, | H0658: 1, H0670: 1, | H0672: 1, S0328: 1, | 50378: 1, 50380: 1, | H0576: 1, L0742: 1, | ,0744: 1, 1,0756: 1, | .0757: 1, H0445: 1, | .0596: 1, L0605: 1, | .0593: 1, L0362: 1, | H0542: 1, H0543: 1, | H0506: 1 and H0352: 1. | S0250: 2 and H0555: 1. | L0748: 40, L0740: 39, 3q21 | .0754: 23, H0556: 19, | H0620: 13, L0755: 12, | .0731: 12, L0741: 11, | S0002: 10, L0766: 10,  | L0439: 10, H0265: 9, | H0013: 9, H0521: 9, | .0747; 9, L0758: 8, | H0599: 7, L0794: 7, | .0751: 7, L0779: 7, | .0777: 7, L0752: 7, |
| <u> </u>             |                     | <u> </u>            | 프<br>               | <u> </u>            | <u>⊐</u>            | <u> </u>            | Ĕ                   | H                   | Ħ                   | <u>S</u>            | <u>当</u>            | <u>고</u>             | <u> </u>            | <u>ਜ਼</u>           | <u> </u>            | <u>H</u>            | H                      | 5                      | Thr-26 to Ala-44, I        | Pro-55 to His-71, L(  | Ser-76 to Cys-83, H   | Asn-92 to Lys-104, L( | Pro-149 to Tyr-158, SC |                      |                     | ᅺ                   | Ĭ                   | <u></u>             | Ĭ                   |
|                      | -                   |                     |                     |                     |                     |                     |                     |                     |                     | <del>-</del>        |                     |                      |                     |                     |                     |                     |                        | 49 - 339 2898          | 516 - 1220 2899            |                       |                       | -,                    |                        |                      |                     |                     |                     |                     |                     |
|                      |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                      |                     |                     |                     |                     |                        | 723                    | 724 5                      |                       |                       |                       |                        |                      |                     |                     |                     |                     | -                   |
|                      | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                    |                     |                     |                     |                     |                        | 1046980                | 1047137                    |                       |                       |                       |                        |                      |                     |                     |                     |                     |                     |
|                      |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                        | HRADC23                | HODHS68                    |                       |                       |                       |                        |                      |                     |                     |                     |                     |                     |

| 276902,             | 600882,             | 601199,             | 601199,             | 601199,             | 601471,             | 601682              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| S0358: 6, S0360: 6, | H0052: 6, H0271: 6, | S0003: 6, S0344: 6, | 30426: 6, L0774: 6, | 30126: 6, L0757: 6, | L0759: 6, S0007: 5, | S0010: 5, H0046: 5, | H0150: 5, H0615: 5, | H0622: 5, H0591: 5, | H0040: 5, H0623: 5, | S0142: 5, L0770: 5, | .0764: 5, L0743: 5, | .0601: 5, H0624: 4, | H0575: 4, H0545: 4, | H0012: 4, S0022: 4, | H0644: 4, H0628: 4, | H0090: 4, H0038: 4, | H0634: 4, T0041: 4, | <br>L0776: 4, L0518: 4, | H0144: 4, S0328: 4, | _0744: 4, L0750: 4, | L0592: 4, H0661: 3, | L0005: 3, H0580: 3, | S0278: 3, L0471: 3, | H0428: 3, H0039: 3, | F0023: 3, H0616: 3, | L0598: 3, L0771: 3, | L0662: 3, H0658: 3, | H0522: 3, L0605: 3, |
| S                   |                     | <u></u>             |                     | <u>s</u>            |                     |                     | . <u></u>           |                     |                     |                     |                     |                     | <u> </u>            | <u> </u>            | <u> </u>            | <del></del>         |                     | <br>                    |                     |                     |                     | <u> </u>            |                     | <u> </u>            |                     |                     |                     | 1                   |
|                     |                     |                     |                     | <u>.</u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <br>                    | *                   |                     |                     |                     | · ·                 |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         | •                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |

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|---------------------|------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|--------------|---------------------|---------------------|---------------------|-----------|-----------|--------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|---------------------|--------------------|------------------|------------------|------------------|------------------|------------------|----------|
|                     |                  |   |                     |                     |                     |                     |                     |              |                     |                     |                     |           |           |        |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                  |                  |                  |                  | į        |
|                     |                  |   |                     |                     |                     |                     |                     |              |                     |                     |                     |           |           |        |                     | _                   |                     |                     |                     |                      |                      |                     |                    |                  |                  |                  |                  |                  |          |
|                     |                  |   |                     |                     |                     | •                   |                     |              |                     |                     |                     | ٠         |           |        |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                  |                  |                  |                  |          |
|                     |                  |   |                     |                     |                     |                     |                     |              |                     |                     | _                   |           |           |        |                     |                     |                     |                     | -                   | _                    |                      |                     |                    |                  |                  | ····             |                  |                  |          |
| 6: 3,               | 57: 2,           | 11: 2,  | 4: 2,               | 3: 2,               | 2: 2,               | 39: 2,              | 24: 2,              | 3: 2,        | 12: 2,              | 57: 2,              | 94: 2,              | L0775: 2, | L0382: 2, | 4. 2,  | 17: 2,              | 90: 2,              | 0: 2,               | 34: 2,              | 6: 2,               | 3: 2,                | 3: 2,                | 1: 2,               | 53: 2,             | 22: 2,           | )2: 1,           | 74: 1,           | 9: 1,            | 33: 1,           | 12: 1,   |
| .0595: 3, S0026: 3, | 3, H06           | 2, H034                                       | 2, S035             | 2, H039             | .0717: 2, S0222: 2, | 2, T003             | 2, H000             | 2, L0483: 2, | H0031: 2, L0142: 2, | H0032: 2, T0067: 2, | 2, H04              | 2, L077   |           |        | .0438: 2, H0547: 2, | 2, H06              | 2, S033             | 2, H013             | H0626: 2, S0206: 2, | .0786: 2, L.0753: 2, | .0608: 2, L.0593: 2, | .0603: 2, S0011: 2, | 2, H06             | 2, H042          | H0170: 1, T0002: | 1, \$602         | 1, T004          | 1, H058          | 1, S0442 |
| .0595:              | H0543: 3, H0657: | S0116: 2, H0341: 2,                           | S0420: 2, S0354: 2, | S0045: 2, H0393: 2, | .0717:              | H0370: 2, T0039: 2, | H0618: 2, H0024: 2, | r0010: 2,    | H0031:              | H0032:              | H0268: 2, H0494: 2, | H0529: 2, | 10375: 2, | .60807 | L0438:              | H0519: 2, H0690: 2, | H0660: 2, S0330: 2, | S0152: 2, H0134: 2, | H0626:              | .0786:               | .0608:               | L0603:              | H0668: 2, H0653: 2 | S0192: 2, H0422: | H0170:           | H0716: 1, S6024: | S0114: 1, T0049: | S0134: 1, H0583: | H0638: 1 |
|                     |                  | <u>, , , , , , , , , , , , , , , , , , , </u> |                     | <u> </u>            |                     |                     |                     |              |                     |                     |                     |           |           |        |                     |                     |                     | <u> </u>            |                     |                      |                      |                     |                    |                  |                  |                  |                  |                  |          |
|                     |                  |   |                     |                     |                     |                     |                     |              |                     |                     |                     |           |           |        |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                  |                  |                  |                  |          |
|                     |                  |   |                     |                     |                     |                     |                     |              |                     |                     |                     |           |           |        |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                  |                  |                  |                  |          |
|                     |                  |   |                     | 'i                  |                     |                     |                     |              |                     |                     |                     |           |           |        |                     |                     |                     |                     |                     | _                    |                      |                     |                    |                  |                  |                  |                  |                  |          |
|                     |                  |   |                     |                     |                     |                     |                     |              |                     |                     |                     | •         |           |        |                     |                     | <del>-</del>        |                     |                     |                      |                      |                     |                    |                  | _                |                  |                  |                  |          |
|                     |                  |   |                     |                     |                     |                     |                     |              |                     |                     |                     |           |           |        |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                  | -                |                  |                  |          |
|                     |                  |   |                     |                     |                     |                     |                     | _            |                     |                     | <del>,</del> -      |           |           |        |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                  |                  |                  |                  |          |
|                     | Ť                |   |                     |                     |                     | •                   |                     |              |                     |                     |                     |           |           |        |                     |                     |                     |                     |                     |                      |                      |                     |                    | ٨                |                  |                  |                  |                  | !        |
| ·                   |                  |   |                     |                     |                     |                     |                     |              |                     |                     |                     | _         |           |        |                     | _                   |                     | _                   | _                   |                      |                      |                     |                    |                  | <del></del>      |                  |                  | _                |          |
| į                   |                  |   |                     |                     |                     |                     |                     |              |                     |                     |                     |           |           |        |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                  |                  |                  |                  |          |
|                     |                  |   |                     |                     |                     |                     |                     |              |                     |                     |                     |           |           |        |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                  |                  |                  |                  |          |

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|------------------|------------------|--------------------|----------|------------------|------------------|--|------------------|------------------|------------------|------------------|--------------------|----------------|------------------|-----------|------------------|------------------|------------------|------------------|--------------|-------------|----------------|------------------|----------|--------------------|------------------|------------------|------------------|------------------|--------------------|
|                  |                  |                    |          |                  |                  |  |                  |                  |                  |                  |                    |                |                  |           |                  |                  |                  |                  |              |             |                |                  |          |                    |                  |                  |                  |                  |                    |
| -                |                  |                    |          |                  |                  |  |                  |                  |                  | <u>-</u> _       |                    |                |                  |           |                  |                  |                  |                  |              |             |                | _                |          |                    |                  |                  |                  |                  |                    |
|                  |                  |                    |          |                  |                  |  | 1"               |                  |                  |                  |                    |                |                  |           |                  |                  |                  |                  |              |             |                |                  |          |                    |                  |                  |                  |                  |                    |
|                  | î <del>T</del>   | .1,                | : 1,     | : 1,             | . <b>.</b> .     | :1,  | : 1,             | <u>.</u> .       | 1,               | : 1,             | : <b>1</b> ,       | <del>-</del> - | :1,              | 1,        | : 1,             | : 1,             | : 1,             | 1,               | <del>.</del> | ·           | <del>.</del> . | : 1,             | <u>۔</u> | ٠ <del>.</del>     | ٠ <u>٠</u> .     | 1,               | .1,              | 1,               | : 1,               |
| S0046            | H0437            | H0441              | , H0455  | H0601            | H0333            | , H0632                                      | , H0270          | H0069            | , \$0280         | H0002            | H0042              | , H0318        | , H0421          | 1, H0251: | , T0115          | H0041            | H0051            | H0083            | H0266        | , H0288:    | l, S0214:      | , H0070          | , H0553  | H0708              | , H0063          | , T0069          | H0100            | T0042            | H0561              |
| H0489: 1, S0046: | H0619: 1, H0437: | H0550: 1, H0441: 1 | 0461: 1, | H0438: 1, H0601: | S0005: 1, H0333: | 0574: 1,                                     | H0486: 1, H0270: | H0244: 1, H0069: | H0635: 1, S0280: | ,0021: 1, H0002: | L0022: 1, H0042: 1 | 0036: 1,       | H0581: 1, H0421: | S0049: 1, | H0309: 1, T0115: | H0597: 1, H0041: | 70003: 1, H0051: | S0051: 1, H0083: | 5028: 1,     | H0267: 1    | H0286: 1       | H0252: 1, H0070: | 0213: 1  | .0055: 1, H0708: 1 | H0598: 1, H0063: | H0056: 1, T0069: | S0386: 1, H0100: | .0564: 1, T0042: | S0016: 1, H0561: 1 |
| 臣                | Ħ                | Ï                  | Ĭ        | Ĭ                | <u>8</u>         | 茁  | 王                | Ħ                | 茁                | ĭ                | <u> </u>           | Ħ              | 耳                | S         | 苴                | Ĭ                | Ĕ                | <u>8</u>         | <u>x</u>     | I           | Ħ              | 苴                | 茁        | ĭ                  | Ī                | Ħ                | <u>x</u>         | 크                | SC                 |
|                  |                  | ,                  |          |                  |                  |  |                  |                  |                  |                  |                    |                |                  |           |                  |                  |                  |                  |              |             |                |                  |          |                    |                  |                  |                  |                  | ļ                  |
|                  |                  |                    |          |                  |                  |  |                  |                  |                  |                  |                    |                |                  |           |                  |                  |                  |                  |              |             |                |                  |          |                    |                  |                  |                  |                  |                    |
|                  |                  |                    |          |                  |                  |  |                  |                  |                  |                  |                    |                |                  |           | -                |                  |                  |                  | •            |             |                |                  |          |                    |                  |                  | _                |                  |                    |
| _                |                  |                    |          |                  | _                |  |                  |                  |                  |                  |                    |                | _                |           |                  |                  |                  |                  | ,            |             |                | -                |          |                    |                  |                  |                  |                  |                    |
| _                |                  |                    |          |                  | •                |  |                  |                  |                  |                  |                    | _              |                  |           |                  |                  |                  |                  |              |             |                |                  |          | _                  |                  | _                |                  |                  |                    |
|                  |                  |                    |          |                  |                  | ·  |                  | ·· <u>·</u> ··   |                  | _                |                    |                |                  |           |                  |                  |                  |                  |              |             | <del></del>    |                  |          |                    |                  |                  |                  |                  |                    |
|                  |                  |                    |          |                  |                  |  |                  |                  |                  |                  |                    |                |                  | ÷         |                  |                  |                  |                  |              |             |                |                  |          |                    |                  |                  |                  |                  |                    |
|                  | v                |                    |          |                  |                  | _  |                  |                  |                  |                  |                    |                |                  |           |                  |                  |                  |                  |              | <del></del> | _              | _                |          |                    |                  |                  |                  |                  |                    |
|                  |                  |                    |          |                  |                  |  |                  |                  |                  |                  |                    |                | ,                |           |                  |                  |                  | I                |              |             |                |                  |          |                    |                  |                  |                  |                  | .                  |
| L                |                  |                    |          |                  |                  | <u>.                                    </u> |                  |                  |                  |                  |                    |                |                  |           | <u>.</u>         |                  |                  |                  |              |             |                |                  |          |                    |                  |                  |                  |                  |                    |

|                  | _                |           |             |                  |             |              |              |            |             |             |           |              |              |              |          |                  |                  | <del></del> |                  |                    |          |                  | ·                |                  |                     |           |                  |                  |                  |
|------------------|------------------|-----------|-------------|------------------|-------------|--------------|--------------|------------|-------------|-------------|-----------|--------------|--------------|--------------|----------|------------------|------------------|-------------|------------------|--------------------|----------|------------------|------------------|------------------|---------------------|-----------|------------------|------------------|------------------|
|                  |                  |           |             |                  |             |              |              |            |             |             |           |              |              |              |          |                  |                  |             |                  |                    |          |                  |                  |                  |                     |           | _                |                  |                  |
|                  |                  |           |             |                  |             |              |              |            |             |             |           |              |              |              |          |                  |                  |             |                  |                    |          |                  |                  |                  | ٠                   |           |                  |                  |                  |
|                  |                  |           |             |                  |             |              |              |            | -           |             |           | _            |              |              |          |                  |                  |             |                  |                    |          |                  |                  |                  | _                   |           |                  |                  | <del></del>      |
| 132: 1,          | 641: 1,          | 369: 1,   | 763: 1,     | 372: 1,          | L0648: 1,   | L0768: 1,    | L0381: 1,    | L0804: 1,  | L0806: 1,   | L0657: 1,   | L0526: 1, | L0367: 1,    | L0791: 1,    | L0664: 1,    | 0659: 1, | 0648: 1,         | 380: 1,          | )454: 1,    | 696: 1,          | 406: 1,            | 0187: 1, | 627: 1,          | 3012: 1,         | 014: 1,          | 028: 1,             | 756: 1,   | 031: 1,          | 707: 1,          | 596: 1,          |
| S0440: 1, H0132: | S0150: 1, H0641: | 52: 1, L( | 52: 1, LC   | .0638: 1, L0372: | 0800: 1, LC | •            | .0561: 1, LC | -          | 0651: 1, LC | 0527: 1, LC |           |              | .0789: 1, LC | .0666: 1, LC | 20: 1, H | H0670: 1, H0648: | H0672: 1, S0380: | 18: 1, S(   | S0013: 1, H0696: | S0044: 1, S0406: 1 | 55: 1, H | S0392: 1, H0627: | H0631: 1, S3012: | S0390: 1, S3014: | S0027: 1, S0028: 1, | 45: 1, LC | .0780: 1, S0031: | S0260: 1, H0707: | S0434: 1, L0596: |
| 804              | S01:             | 90H       | <u>107</u>  | <u>106</u>       | <u>8</u> 07 | <u> 1</u> 02 | <u>105</u>   | <u>108</u> | 106         | 1.05        | 106       | 105          | 107          | 100          | H05      | 90H              | 90H              | H05         | 200              | 200                | H05      | S03              | 90H              | S03              | <u>2003</u>         | L07       | L07              | S02              | S04.             |
|                  |                  |           |             | •                |             |              |              |            |             |             |           |              |              |              |          |                  |                  |             |                  |                    |          |                  |                  |                  |                     |           |                  |                  |                  |
|                  |                  |           |             |                  |             |              |              |            |             |             |           |              |              |              |          |                  |                  |             |                  |                    |          |                  |                  |                  |                     |           |                  |                  |                  |
|                  |                  |           |             | -                |             | •            |              |            |             |             |           |              |              |              |          |                  | -                | ,           |                  |                    |          |                  |                  |                  |                     |           | _                |                  |                  |
|                  |                  | •         |             |                  |             |              |              |            |             |             | •         |              |              |              |          |                  |                  |             |                  |                    |          |                  |                  |                  |                     |           | _                |                  |                  |
| <del>-</del>     |                  |           | _           |                  |             |              |              |            |             |             |           |              | -            |              |          |                  |                  |             |                  | _                  |          |                  | •                |                  |                     |           |                  |                  |                  |
|                  |                  |           |             |                  |             |              |              |            | <del></del> |             |           |              |              |              |          |                  |                  |             |                  | <del></del>        |          |                  | <u>.</u>         |                  |                     |           |                  |                  |                  |
|                  |                  |           |             |                  |             |              |              |            |             |             | i         |              |              |              |          |                  |                  |             |                  |                    |          |                  |                  |                  |                     |           |                  |                  |                  |
|                  |                  |           | <del></del> |                  |             |              | _            |            |             |             |           | <del>-</del> |              |              |          |                  |                  |             |                  |                    |          |                  |                  | <u>.</u>         | •                   |           | ···              |                  |                  |
| _                |                  |           |             |                  |             |              |              |            |             |             |           |              |              |              |          |                  |                  |             |                  |                    |          |                  |                  |                  |                     |           |                  |                  |                  |

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|--|---|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |   |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0588: 1, L0599: 1,<br>L0362: 1, L0361: 1, | S02/6: 1, H0342: 1,<br>S0384: 1 and H0293: 1. | H0556: 15, H0090: 12, | S0152: 11, H0543: 10, | H0553: 9, S0026: 9, | H0341: 8, S0358: 8, | H0046: 8, S0440: 8, | L0659: 8, L0665: 8, | L0595: 8, H0657: 7, | H0266: 7, H0591: 7, | H0529: 7, L0666: 7, | L0663: 7, H0144: 7, | H0547: 7, H0521: 7, | L0756: 7, L0731: 7, | S0360: 6, S0476: 6, | S0003: 6, H0615: 6, | H0644: 6, H0040: 6, | H0413: 6, L0662: 6, | L0664: 6, L0754: 6, | L0752: 6, L0599: 6, | L0608: 6, H0624: 5, | S0408: 5, T0109: 5, | H0013: 5, H0551: 5, | H0560: 5, L0803: 5, | L0655: 5, H0519: 5, | S0126: 5, H0684: 5, | L0439: 5, L0759: 5, | S0436: 5, H0542: 5, |
|  |   | Gln-1 to Gln-11,      |                       |                     |                     | -5                  |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |   | 2900                  |                       |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                   |
|  |   | 275 - 814.            |                       |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |   | 725                   |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |
|  |   | 1047169               |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |   | HOPKT59               |                       |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     | ***                 |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |

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|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     | •                   |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| $\vdash$          |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     | _                   | _                   |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| $\vdash$          |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |
| 4                 | . 4.   | 4,                  | 4,                  | 4,                  | 4,                  | 4,                  | 4,                 | 4,                  | ິຕ໌                 | ຕ໌                  | ຕ໌                  | ິຕ໌                 | ω,                 | ω,                  | ς,                  | 3,                  | 'n,                 | 33                  | 4                   | ų                   | (તું                | 4                   | ર્વ                 | ر<br>ا              | رب<br>د             | ζ,                  | 4                   | ત્                  | 7                   |
| H0423- 5 H0265- 4 | S0420: 4, H0031: 4,                          | HO598: 4, H0038: 4, | H0633: 4, L0520: 4, | .0770: 4, L0646: 4, | .0771: 4, L0649: 4, | .0775: 4, H0659: 4, | 0779: 4, L0758: 4, | H0445: 4, H0422: 4, | S0424: 4, H0656: 3, | S0132: 3, H0586: 3, | H0486: 3, H0327: 3, | S0051: 3, H0083: 3, | H0687: 3, H0039: 3 | .0483: 3, H0169: 3, | .0369: 3, L0769: 3, | .0657: 3, L0809: 3, | .0438: 3, H0520: 3, | S0330: 3, H0522: 3, | H0665: 3, H0171: 2, | H0686: 2, S0040: 2, | H0716: 2, H0295: 2, | S0134: 2, H0583: 2, | H0663: 2, H0402: 2, | S0418: 2, L0005: 2, | S0442: 2, S0354: 2, | 30376: 2, S0046: 2, | H0619: 2, H0393: 2, | .0717: 2, H0497: 2, | H0574: 2, T0114: 2, |
| HOH               | H  | H,                  | S                   | Ľ                   | Š                   | )H                  | 100                | , HO                | HO                  | H0.                 | , HO                | HOH                 | , HO               | HO                  | 100                 | 100                 | H0.                 | HO                  | , HO                | SO.                 | , HO                | H0                  | , HO                | 3                   | S03                 | S00                 | , HO                | H,                  | T0                  |
| 3.5               | 4,   | 8: 4                | 3:4                 | 0:4                 | 1:4,                | 5:4,                | 9:4,               | 5:4                 | 4:4                 | 2: 3,               | 6:3                 | 1: 3,               | 7:3                | 3: 3,               | 9.3                 | 7:3,                | 8:3,                | 0:3                 | 5:3                 | 6:2                 | 6:2                 | 4.2,                | 3:2                 | 8: 2,               | 2:2                 | 6:2,                | 9:2                 | 7:2                 | 4:2                 |
| 1042              | 242  | 1059                | <b>HO63</b>         | 770                 | 770                 | 770                 | 770                | <b>4</b> 01         | 042                 | 013                 | 1048                | 005                 | 390I               | 248                 | 036                 | 265                 | 243                 | 333                 | <del>1</del> 066    | <b>390</b> F        | 1071                | 013                 | 1066                | 941                 | 46                  | 3037                | 1061                | 07.1                | <b>TO57</b>         |
| 片                 | <u>.                                    </u> | بلر                 | وبلس                | <u> </u>            | <u> </u>            | <u> </u>            | <u> </u>           | <u> </u>            |                     | C                   |                     | נעט                 | 14                 |                     | <u> </u>            |                     | =                   | <u>(7)</u>          | <u> </u>            | <u> </u>            | <u>, 144.</u>       | <u> </u>            | <del>,,,</del>      | <u> </u>            | <u>(,)</u>          | <u> </u>            | _=                  | <u> </u>            | بئر                 |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    | ,                   |                     |                     |                     |                     | •                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| l                 |  |                     |                     | ,                   |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| F                 |  |                     | _                   |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     | •                   | _                   |                     | _                  | _                   |                     |                     |                     | _                   |                    |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   | _                   |                     |                     | _                   |
| Γ                 |  |                     |                     |                     |                     |                     | -                  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |
| _                 |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     | 4                   |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     | -                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| T                 |  |                     |                     |                     |                     |                     | ,                  |                     |                     | *******             |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     | ٠                   | •                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
|                   |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L                 |  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     | •                   | -                   |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                    |                     |                     |                     |                     |                     |                     |                     |
| H0427: 2, H0590: 2, | H0546: 2, H0012: 2, | H0373: 2, H0051: 2, | H0428: 2, H0628: 2, | H0673: 2, H0124: 2, | H0634: 2, H0616: 2, | H0488: 2, H0412: 2, | H0056: 2, L0564: 2, | H0494: 2, H0561: 2, | H0509: 2, H0132: 2, | 10646: 2, L0640: 2, | .0763: 2, L0772: 2, | 0373: 2, L0521: 2, | 0766: 2, L0804: 2, | .0805: 2, L0653: 2, | .0790: 2, H0690: 2, | S0328: 2, H0539: 2, | H0518: 2, H0134: 2, | H0631: 2, L0748: 2, | .0740: 2, S0031: 2, | S0434: 2, L0588: 2, | .0485: 2, L0593: 2, | 0603: 2, H0713: 1, | H0717: 1, S0218: 1, | S0116: 1, S0212: 1, | H0671: 1, H0664: 1, | H0662: 1, H0450: 1, | H0125: 1, S0444: 1, | F0008: 1, H0580: 1, | S0045: 1, H0351: 1, |
|                     | <u>H</u>            | H                   | H                   | Ξ.                  | H                   | H                   | H                   | H                   | 田                   | H                   | <u> </u>            | <u>.</u>           | <u> </u>           | Ð                   | 그                   | <u>X</u>            | <u>H</u>            | <u>H</u>            | Ŧ                   | <u> </u>            | ם                   | <u> </u>           | 王                   | S                   | <u> </u>            | H                   | <u>工</u>            | <u>:Ē</u>           | S                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                     |                     | -                   |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |                     |                     |                    |                    |                     |                     |                     |                     | 4                   | =                   |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | -                   |                     | <del></del>         | _                   |                     |                     |                     | -                   |                    | -                  |                     |                     |                     |                     |                     |                     | .,                  |                     |                    |                     | _                   |                     |                     | :                   |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                    |                    | •                   |                     |                     |                     |                     | ·                   |                     |                     | _                  |                     |                     |                     |                     |                     | :                   |                     |

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|---------------------|-------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                   |                     |                   |                     |                     |                     |   |                     |                     | . —_                |                     |                     |                     |                     |                  | _                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |
|                     |                   |                     |                   |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
| S0222: 1, H0409: 1, | 392: 1, H0642: 1, | H0331: 1, H0632: 1, | 250: 1, H0069: 1, | H0635: 1, S0280: 1, | H0156: 1, L0021: 1, | H0042: 1, H0575: 1, | S0474: 1, H0581: 1,                             | H0421: 1, H0052: 1, | H0251: 1, H0263: 1, | F0103: 1, H0545: 1, | HO457: 1, H0041: 1, | H0123: 1, H0050: 1, | .0471: 1, H0620: 1, | 10024: 1, H0057: 1, | 88: 1, H0239: 1, | H0375: 1, H0594: 1, | S0318: 1, S0316: 1, | H0286: 1, S0022: 1, | S0214: 1, H0328: 1, | H0622: 1, T0023: 1, | H0119: 1, L0142: 1, | H0032: 1, H0674: 1, | S0364: 1, H0376: 1, | H0135: 1, H0087: 1, | F0067: 1, H0623: 1, | H0100: 1, T0041: 1, | F0042: 1, H0625: 1, | .0065: 1, S0438: 1, | H0131: 1, S0150: 1, |
| 802                 | HO                | HO                  | HO                | HOO                 | [OH]                | HOU                 | <u>  S04                                   </u> | 70H                 | (H)                 | T01                 | )HO                 | .OH                 | 707                 | )OH                 | S03              | HO:                 | SOS .               | НО.                 | 20S                 | OH                  | HO                  | HO                  | SOS                 | HO                  | TOC                 | HO                  | TOC                 | TOC                 | HO                  |
| -                   |                   |                     |                   |                     |                     |                     |   |                     |                     |                     |                     |                     | _                   |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |
|                     |                   |                     |                   |                     |                     |                     |   |                     | •                   | ·                   |                     |                     |                     |                     |                  | -                   |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     |                   |                     |                   | ·                   |                     | -                   |   |                     |                     |                     |                     |                     | _                   |                     | •                |                     |                     |                     |                     | <u>-</u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                       |                     |                     |                     |      |                     |                        |           |                      |
| S0142: 1, S0422: 1, | L0598: 1, L0631: 1, | L0638: 1, L0641: 1, | L0764: 1, L0773: 1, | L0648: 1, L0363: 1, | L0767: 1, L0768: 1, | L5574: 1, L0381: 1, | L0552: 1, L0774: 1, | L0375: 1, L0607: 1, | L0634: 1, L0782: 1, | S0428: 1, S0374: 1, | H0593: 1, H0689: 1, | H0435: 1, H0660: 1, | H0666: 1, H0648: 1, | H0672: 1, S0380: 1, | H0709: 1, S0013: 1, | H0696: 1, H0704: 1, | S0174: 1, S0406: 1, | H0436: 1, H0576: 1, | H0478: 1, S0432: 1, | \$3012: 1, \$0028: 1, | L0777: 1, L0755: 1, | L0480: 1, L0597: 1, | L0589: 1, L0591: 1, | ئے'  | H0668: 1, H0667: 1, | H0136: 1, S0194: 1 and | H0008: 1. | L0747: 10, L0758: 6, |
|                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     | ,                   |                     |                     |                     |                     |                       |                     |                     |                     |      |                     |                        |           | Pro-15 to Leu-21,    |
|                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       |                     |                     |                     |      |                     |                        |           | 2901                 |
|                     |                     |                     |                     |                     | •                   |                     |                     |                     | - <del></del>       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       | <del></del>         |                     |                     | <br> | <del></del>         |                        |           | 121 - 786            |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       |                     |                     |                     |      |                     |                        |           | 726                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       |                     |                     |                     |      |                     |                        |           | 1047212              |
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| L0752: 5, L0774: 4, | Arg-110 to Arg-115, L0663: 4, L0748: 4, | ,L0751: 4, L0775: 3,                 | , L0757: 3, L0759: 3, |                     | H0687: 2, L0769: 2, | L0761: 2, L0766: 2, | L0806: 2, L0750: 2, | L0777: 2, L0753: 2, | L0755: 2, H0254: 1, | S0420: 1, S0356: 1, | H0392: 1, H0587: 1, | L0021: 1, H0046: 1, | H0178: 1, H0620: 1, | S0050: 1, H0617: 1, | H0673: 1, H0616: 1, | S0144: 1, S0344: 1, | L0637: 1, L0646: 1, | L0374: 1, L0771: 1, | L0767: 1, L0661: 1, | L0629: 1, L0659: 1, | L0783: 1, L0367: 1, | L0368: 1, L0666: 1, | L0664: 1, L0665: 1, | H0670: 1, H0672: 1, | S0404: 1, H0436: 1, | L0740: 1, L0749: 1, | L0603: 1, H0422: 1, | S0424: 1 and H0677: 1. | L0777: 13, L0794: 8, |
| Lys-29 to Asn-39,   | Arg-110 to Arg-115                      | Lys-120 to Asn-125, L0751: 4, L0775: | Glu-153 to Leu-158,   | Pro-173 to Val-181. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Lys-1 to Leu-6,      |
|                     |   |                                      |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                      | 2902                 |
|                     |   |                                      | •                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2 - 595              |
|                     |   |                                      |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 727                  |
|                     |   |                                      | •                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1047381              |
|                     |   |                                      |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HPIAN63              |

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|                    |                      | _                   |                     |                      |                    |                     |                      | _                  |                     |                     |                      |                    | •                   | _                   |                     |                     | _                   |                     | •                   | •                   | .2                  | _                   |                    |                     |                     |  |                     | •                  | •                |
| 8: 7,              | 9:6,                 | 7:5                 | 9:5,                | 6:5,                 | 18:4               | 70:4                | 9.4                  | 3:3,               | 34:3                | 9.3                 | 9:3,                 | 39:3               | 55: 2               | 2:2                 | 8: 2,               | 6: 2,               | 9:2                 | 9.2,                | 50:2                | 28:2                | 0529                | 6: 2,               | 70:2               | 6: 2                | 9: 2,               | 1:2  | 4: 2,               | 70:1               | 57: 1            |
| 507                | 5/07                 | H061                | 507                 | 1059                 | 90H                | 1.07                | 1078                 | H001               | H04                 | 507                 | 1050                 | H06                | H02                 | <b>S04</b>          | 3035                | S004                | H055                | <b>3004</b>         | H005                | H03;                | 2, H                | L07                 | .90H               | <b>S040</b>         | L074                | 1,073  | L059                | H01,               | 90H              |
| 7.                 | . 6, ]               | : 6, ]              | . 5, ]              | : 5, ]               | 4.                 | 4,                  | 4.                   | .3,1               | 3.3,                | : 3, ]              | : 3, ]               | : 3,               | 1:2,                | 7:2,                | 2,                  | 2,                  | . 2, ]              | : 2,                | . 2,                | 3:2,                | Ä.                  | 2,                  | . 2                | .2                  | 2,                  | 2,   | 2,                  | 2:2                | l: 1,            |
| .0438: 7, L0748: 7 | .0659: 6, L.0759: 6, | .0591: 6, H0617: 5, | .0439: 5, L0779: 5, | .0758: 5, L.0596: 5, | H0556: 4, H0618: 4 | H0052: 4, L0770: 4, | .0803: 4, L.0789: 4, | S0418: 3, H0013: 3 | H0628: 3, H0494: 3, | .0598: 3, L.0769: 3 | .0804: 3, L.0509: 3, | .0665: 3, H0659: 3 | H0624: 2, H0265: 2, | H0717: 2, S0442: 2, | S0354: 2, S0358: 2, | .0149: 2, S0046: 2, | S0278: 2, H0559: 2, | S0010: 2, S0049: 2, | .0041: 2, H0050: 2, | H0083: 2, H0328: 2, | INKWN: 2, H0529: 2, | .0662: 2, L0776: 2, | 0655: 2, H0670: 2, | H0660: 2, S0406: 2, | .0747: 2, L0749: 2, | .0752: 2, L.0731: 2,                           | S0436: 2, L0594: 2, | H0542: 2, H0170: 1 | H0171: 1, H0657: |
| 1                  | 2                    | <u> </u>            | <u> </u>            | <u> </u>             | 프                  | 工                   | <u> </u>             | Ø                  | 正                   | <u> </u>            | Ъ                    | 户                  | 正                   | Ξ                   | S                   | <u> </u>            | S                   | Ś                   | ᆜ                   | 正                   | ⊇                   | <u></u>             |                    | Œ                   |                     | 户  | S                   | 프                  | <u> </u>         |
| 41,                | .63                  |                     |                     |                      |                    |                     |                      |                    |                     |                     |                      |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |  |                     |                    |                  |
| Ser-36 to Ser-41,  | Arg-54 to His-63.    |                     | •                   |                      |                    |                     |                      |                    |                     |                     |                      |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |  |                     |                    |                  |
| 36 to              | -54 to               |                     |                     |                      |                    |                     |                      |                    |                     |                     |                      |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |  |                     |                    |                  |
| Ser-               | Arg.                 | )                   |                     |                      |                    |                     |                      |                    |                     |                     |                      |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |  | ٠                   |                    |                  |
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| $\vdash$           |                      |                     |                     |                      |                    |                     | **                   |                    |                     |                     |                      |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     | _  | _                   |                    | _                |
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| $\vdash$           |                      |                     |                     |                      |                    |                     |                      |                    |                     |                     |                      |                    |                     |                     |                     | <del></del>         |                     |                     |                     | · _                 |                     |                     |                    |                     |                     |  |                     |                    |                  |
|                    |                      |                     |                     |                      |                    |                     |                      |                    |                     |                     |                      |                    |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |  |                     |                    |                  |
|                    |                      |                     |                     |                      |                    |                     |                      |                    |                     |                     |                      |                    |                     |                     |                     | *                   |                     |                     |                     |                     |                     |                     | •                  |                     |                     |  |                     |                    |                  |
| Ĺ_                 |                      |                     |                     |                      |                    |                     |                      |                    |                     |                     |                      |                    |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                    |                     |                     |  |                     |                    |                  |

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|                 |                     |                     |                 | <u>.</u>         |                  |                 |                     | _                   |                 |   |                  |                     |                 |                 |              |             | •               |                  |                     |                  |                  |                     | -                |          |                     |                      |                     |                     |                     |
|                 |                     |                     | •               |                  |                  |                 |                     |                     |                 |   |                  | <u>.</u>            |                 |                 |              |             |                 |                  |                     |                  |                  |                     |                  | _        |                     |                      |                     |                     |                     |
| 5: 1, H0384: 1, | H0671: 1, H0663: 1, | L0534: 1, S0356: 1, | 4: 1, S0408: 1, | 19: 1, S0222: 1, | 13: 1, H0632: 1, | 4: 1, H0257: 1, | H0486: 1, T0082: 1, | T0048: 1, H0318: 1, | 4: 1, H0194: 1, | H0263: 1, H0327: 1,                     | 14: 1, H0546: 1, | H0046: 1, H0057: 1, | 3: 1, H0051: 1, | 1: 1, T0010: 1, |              | Ţ,          | 3: 1, H0604: 1, | 44: 1, H0068: 1, | H0316: 1, S0036: 1, | t0: 1, H0164: 1, | 13: 1, H0059: 1, | H0100: 1, L0564: 1, | 25: 1, S0448: 1, |          | .0637: 1, L0373: 1, | .0800: 1, L.0374: 1, | .0765: 1, L0771: 1, | .0766: 1, L0649: 1, | J0378: 1, L0805: 1, |
| L0785: 1        | H067                | L053                | S044            | H05              | H064             | S041            | H048                | T004                | S047            | H026                                    | H0544: 1         | H007                | L0163: 1        | S0051: 1        | H0266:       | L0052:      | \$0003: 1       | H0644:           | H03                 | H0040: 1         | H0413:           | )TÓH                | H0625:           | S0440: 1 | L063                | 1708C                | )T016               | L076                | L037                |
|                 |                     |                     | ,               |                  |                  |                 |                     |                     |                 | *************************************** |                  |                     |                 |                 |              |             |                 |                  |                     |                  |                  |                     |                  |          |                     | ٠                    |                     |                     |                     |
|                 |                     |                     |                 |                  |                  |                 |                     |                     |                 | <del></del>                             | <u>.</u>         |                     |                 |                 |              | <del></del> |                 |                  |                     |                  | <del></del>      |                     |                  |          | ·<br>               |                      |                     |                     | _                   |
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| L0493: 1, L0783: 1,<br>L0383: 1, L5622: 1,<br>L0368: 1, L0787: 1,<br>L0666: 1, L0663: 1,<br>H0144: 1, S0374: 1,<br>L0565: 1, H0520: 1,<br>H0547: 1, H0658: 1,<br>H0666: 1, H0672: 1,<br>H0651: 1, S0380: 1,<br>L0741: 1, L0754: 1,<br>L0750: 1, L0756: 1,<br>L0750: 1, L0485: 1,<br>L0590: 1, L0485: 1,<br>L0593: 1, H0506: 1 and<br>H0352: 1. | L0794: 6, H0685: 2,<br>S0356: 2, H0090: 2,<br>H0494: 2, L0766: 2,<br>L0803: 2, L0654: 2,<br>L0865: 2, H0435: 2,<br>L0362: 2, H0484: 1,<br>H0384: 1, H0484: 1,<br>S0418: 1, H0497: 1,<br>H0013: 1, S0010: 1,<br>S0346: 1, S0049: 1,<br>H0674: 1, L0455: 1,<br>H0674: 1, L0639: 1,<br>L0800: 1, L0376: 1, |
|--|---|
|  | Glu-16 to Gly-28,<br>Glu-73 to Glu-78,<br>Asp-94 to Ser-103,<br>Lys-124 to Asp-129,<br>Gln-149 to Arg-155,<br>Ala-190 to Ser-233,<br>Val-240 to Pro-246.  |
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| L0805: 1,<br>L0659: 1,<br>L0809: 1,<br>L0663: 1,<br>S0374: 1,<br>S0126: 1,<br>H0539: 1,<br>S0037: 1,<br>L0779: 1,<br>L0755: 1,                                     | 1, AR033: 1, AR053: 0, AR061: 0, AR055: 0, AR055: 29, H0703: 0, H0717: 1, H0689: 2, 1, H0695: 2, 1, H0699: 1, 1, H0709: 1, |
| 1, L0805: 1, L0659: 1, L0663: 1, L0663: 1, S0126: 1, H0539: 1, S0037: 1, L0779: 1, L0755: 1, L0592:  | 1, A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |
| L0378: 1, L0805: L0657: 1, L0659: L0783: 1, L0809: L0789: 1, L0663: L0664: 1, S0126: H0666: 1, H0539: S0152: 1, S0037: L0777: 1, L0755: S0436: 1, L0592: H0506: 1. | Glu-17 to Val-22, AR104: 1, AR033: Val-29 to Asn-38, AR089: 1, AR053: Gly-60 to Val-67, AR096: 0, AR061: Gln-84 to Glu-93, AR039: 0, AR052: Lys-106 to Leu-115, AR060: 0, AR055: Gln-118 to Gln-123, H0694: 29, H0703: Lys-152 to Val-159. H0683: 10, H0717: 7 H0713: 6, H0687: 4, H0656: 3, H0688: 2, H0689: 2, H0689: 2, H0689: 2, H0684: 2, H0699: 1, H0590: 1, H0590: 1, H0590: 1, H0590: 1, H0590: 1, H0590: 1, H0590: 1, H0590: 1, H0563: 1, H0563: 1, H0569: 1, H0563: 1, H |
| <u>TTTTTEESTTSE</u>  | 53,  |
|  | Val-22<br>Asn-33<br>Val-67<br>Glu-97<br>J.Leu-<br>O. Gln-  |
|  | Glu-17 to Val-22,<br>Val-29 to Asn-38,<br>Gly-60 to Val-67,<br>Gln-84 to Glu-93,<br>Lys-106 to Leu-115,<br>Gln-118 to Gln-123,<br>Lys-152 to Val-159.  |
|  | Chys.  |
|  | 2904   |
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| S0028: 1, H0707: 1 and | H0543: 1. | L0794: 8, H0556: 4, | H0046: 4, L0809: 3, | L0748: 3, H0341: 2, | S0356: 2, S0046: 2,                     | H0100: 2, L0769: 2,                     | L0659: 2, S0328: 2, | L0742: 2, H0422: 2, | H0265: 1, T0002: 1, | S0418: 1, S0420: 1, | S0354: 1, S0045: 1, | L0717: 1, H0549: 1, | S0222: 1, H0586: 1, | H0156: 1, T0110: 1, | H0150: 1, S0051: 1, | H0594: 1, H0266: 1, | S0250: 1, H0604: 1, | S0364: 1, H0634: 1, | H0412: 1, H0494: 1, | H0561: 1, H0695: 1, | H0529: 1, L0761: 1, | L0667: 1, L0772: 1, | L0643: 1, L0764: 1, | L0771: 1, L0768: 1, | L0766: 1, L0803: 1, | L0629: 1, L0368: 1, | L0788: 1, H0690: 1, | H0682: 1, H0660: 1, | S0152: 1, S0404: 1, |
|                        |           | Gln-15 to Phe-20,   | Ser-49 to Tyr-54,   | Glu-111 to Glu-121, | Arg-185 to Asp-190, S0356: 2, S0046: 2, | Phe-206 to Asp-212, H0100: 2, L0769: 2, | Glu-309 to Pro-314. |                     |                     |                     |                     | -                   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        |           | 2905                |                     |                     |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        |           | 3 - 1016            |                     | ,                   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     | •                   |                     |
|                        |           | 730                 |                     |                     |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        |           | 1047483             |                     |                     | - <del>.</del>                          |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | *.                  |                     |
|                        |           | HOCQI51             |                     |                     |   |   |                     |                     |                     |                     |                     |                     | <del>-,</del>       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |

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|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   |                     |                     | -                   |                     |                     |                     |                     |                     |                     | <del></del>         | -                   |                     |                     |                     |                     |                     |                     |                     | <u></u>             |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0747: 1, L0755: 1,<br>H0445: 1 and H0542: 1. | H0046: 9, L0766: 8, | L0731: 4, S0360: 3, | S0408: 3, H0529: 3, | L0769: 3, L0608: 3, | H0543: 3, H0656: 2, | H0341: 2, S0046: 2, | S0010: 2, H0318: 2, | H0616: 2, S0150: 2, | S0002: 2, L0803: 2, | L0659: 2, S0374: 2, | H0684: 2, S0328: 2, | L0750: 2, L0752: 2, | L0759: 2, H0170: 1, | S0134: 1, H0657: 1, | H0637: 1, H0580: 1, | H0486: 1, T0040: 1, | T0109: 1, L0021: 1, | H0575: 1, H0581: 1, | H0052: 1, H0266: 1, | H0188: 1, S0214: 1, | H0328: 1, H0615: 1, | H0428: 1, H0039: 1, | H0553: 1, H0598: 1, | H0163: 1, H0591: 1, | H0038: 1, H0040: 1, | T0067: 1, H0413: 1, | S0464: 1, S0440: 1, | L0598: 1, L0772: 1, |
|   | Met-18 to Tyr-45,   |                     | Gln-89 to Glu-107,  | Pro-109 to Ala-132. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ;                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 2906                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 3 - 434             |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |
|   | 731                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 1047634             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | HOPKE15             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| L0800: 1, L0764: 1,<br>L0773: 1, L0648: 1,<br>L0768: 1, L0774: 1,<br>L0775: 1, L0382: 1,<br>L0792: 1, L0666: 1,<br>H0520: 1, S0126: 1,<br>H0520: 1, S0126: 1,<br>H0539: 1, S0378: 1,<br>S0380: 1, S0152: 1,<br>H0521: 1, H0696: 1,<br>H0521: 1, L0751: 1,<br>L0777: 1, L0751: 1,<br>L0778: 1, S0031: 1,<br>L0480: 1, L0596: 1,<br>L0592: 1, H0653: 1,<br>L0592: 1, S0192: 1,<br>H0667: 1, S0192: 1, | H0542: 1 and H0422: 1. L0758: 6, L0731: 4, L0747: 3, S0342: 2, L0769: 2, L0768: 2, L0749: 2, L0615: 1, H0686: 1, H0125: 1, S0418: 1, S0354: 1, S0418: 1, S0354: 1, S0422: 1, H0613: 1, H0004: 1, H0510: 1, S6028: 1, H0643: 1, H0039: 1, H0494: 1,  |
|---|---|
|   | H0542: 1 and H042  Pro-41 to Glu-47, L0758: 6, L0731: Thr-169 to Glu-174, L0747: 3, S0342: 2 Gly-252 to Glu-259, L0769: 2, L0768: 2 Pro-343 to Ser-348, L0749: 2, L0615: 1 Asn-379 to Ala-384, H0686: 1, H0125: His-425 to Glu-432, S0418: 1, S0354: 1 Asn-505 to Asn-S0358: 1, S0360: 1 S0222: 1, H0613: 1 S0222: 1, H0613: 1 S0222: 1, H0613: 1 S6028: 1, H0615: 1 H0039: 1, H0494: 1, L0762: 1 |
|   | 2907  |
| ·   | 748 - 2463  |
|   | 732   |
|   | 1047646   |
|   | HMAEL73   |

| L0388: 1, L0775: 1,<br>L0789: 1, H0689: 1,<br>H0435: 1, H0648: 1,<br>S0152: 1, L0744: 1,<br>L0745: 1, L0755: 1 and<br>H0423: 1. | H0551: 4, H0494: 4,<br>H0561: 3, H0529: 3,<br>H0521: 3, H0486: 2,<br>L0471: 2, H0373: 2,<br>H0550: 2, H0687: 2,<br>H0553: 2, H0708: 2,<br>H0553: 2, L0774: 2,<br>H0547: 2, L0774: 2,<br>H0539: 2, L0439: 2,<br>L0754: 2, L0439: 2,<br>H0685: 1, S0282: 1,<br>S0418: 1, H0637: 1,<br>H0530: 1, T0010: 1,<br>S6028: 1, T0023: 1,<br>H0212: 1, T0042: 1,<br>L0768: 1, L0637: 1,<br>L0768: 1, L0637: 1,<br>L0768: 1, L0637: 1,<br>L0768: 1, L0637: 1,<br>L0768: 1, H0435: 1,<br>H0670: 1, H0660: 1,<br>H0710: 1, H0518: 1,   |
|---|--|
|   | Arg-1 to Tyr-7, H0551: 4, H0494: 4  Arg-17 to Arg-23, H0561: 3, H0529: 3, Glu-40 to Phe-45, H0521: 3, H0486: 2, Thr-64 to Tyr-71, L0471: 2, H0510: 2, H0687: 2, Arg-147 to Glu-127, H0510: 2, H0509: 2, L0794: 2, L0774: 2, H0541 to Ser-148, H0553: 2, L0439: 2, L0754: 2, L0777: 2, H0685: 1, S0282: 1, S0418: 1, H0639: 1, H0685: 1, H0156: 1, H0530: 1, T0042: 1, L0768: 1, L0768: 1, L0768: 1, L0768: 1, L0768: 1, L0768: 1, L0768: 1, L0768: 1, H0670: 1 |
|   | 2908   |
|   | 2 - 445  |
|   | 733  |
|   | 1047663  |
|   | HNOKE42  |

|  |                                      |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                        |                   |                       |                       | _                     |              |                     |                     |                     |                     |                     |                     |
|--|--------------------------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-------------------|-----------------------|-----------------------|-----------------------|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |                                      |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   | .                      | 141750,           | 141800,               | 141800,               | 141800,               | 141800,      | 141850,             | 141850,             | 141850,             | 141850,             | 141850,             | 156850,             |
|  |                                      |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <b>~</b>               | 16p13.3           |                       |                       |                       |              |                     |                     |                     |                     |                     |                     |
| S0176: 1, L0748: 1,<br>L0749: 1, L0731: 1 and<br>L0758: 1. | H0414: 2                             | S0136-25 1 0665-4 | S0001: 1. H0662: 1. | H0632: 1, H0594: 1, | H0188: 1, H0598: 1, | H0379: 1, S0294: 1, | L0764: 1, L0521: 1, | L0803: 1, L0805: 1, | L0493: 1, L0514: 1, | L0515: 1, L0659: 1, | H0689: 1, H0683: 1, | H0670: 1, H0672: 1, | S0328: 1, H0539: 1, | H0478: 1, L0777: 1, | L0731: 1 and L0599: 1. | AR053: 18, AR089: | 16, AR096; 15, AR033: | 14, AR039: 12, AR060: | 11, AR104: 11, AR055: | 10, AR061: 6 | H0251: 6, H0412: 2, | H0295: 1, S0114: 1, | H0657: 1, H0255: 1, | H0663: 1, H0619: 1, | S0222: 1, H0392: 1, | H0333: 1, H0486: 1, |
|  | Glu-1 to Leu-8,<br>Arg-38 to Cys-49. | Ala-1 to I all-7  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Pro-12 to Pro-20, | Leu-24 to Ser-31,     |                       | Arg-84 to Pro-91.     |              |                     |                     |                     |                     |                     | ·                   |
|  | 2909                                 | 2010              | 21,7                |                     |                     | ,                   |                     | ٠                   |                     | •                   |                     |                     |                     |                     |                        | 2911              |                       |                       |                       |              |                     |                     |                     |                     |                     |                     |
|  | 2 - 220                              | 120 437           | 1C+ /71             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                      | 826 - 554         |                       |                       |                       |              |                     |                     |                     |                     |                     |                     |
|  | 734                                  | 735               | 3                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 736               |                       |                       |                       |              |                     |                     |                     |                     |                     |                     |
|  | 1047670                              | 1047716           | 01//101             |                     | ,                   | •                   |                     |                     |                     | ٠                   |                     |                     |                     |                     |                        | 1047820           |                       |                       |                       |              |                     |                     |                     |                     |                     |                     |
|  | HOFAE31                              | HCI CXK3          | TOTOTOTI            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HNOAC93           |                       |                       |                       |              |                     |                     |                     |                     |                     |                     |

| 186580,             | 191092,             | 600140,             | 600273,             | 601313,             | 601785              |                     | -                   |                     |                     |                     |                     |                        |           |                  |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|
| H0635: 1, H0318: 1, | H0050: 1, H0051: 1, | 50388: 1, S0051: 1, | H0239: 1, H0688: 1, | H0644: 1, H0181: 1, | H0617: 1, H0606: 1, | S0438: 1, L0769: 1, | L0761: 1, L0803: 1, | H0547: 1, S0126: 1, | H0658: 1, H0672: 1, | H0651: 1, S0404: 1, | S0406: 1, H0436: 1, | L0748: 1, L0751: 1 and | S0276: 1. | 5, AR061:        | AR104: 3, AR089: 3, | AR096: 2, AR055: 2 | S0206: 5, H0413: 3, | S0028: 3, H0170: 2, | S0212: 2, H0546: 2, | H0266: 2, H0171: 1, | S0040: 1, H0580: 1, | H0208: 1, H0411: 1, | H0437: 1, H0453: 1, | H0427: 1, H0051: 1, | S0051: 1, H0355: 1, | S0003: 1, H0031: 1, | H0412: 1, S0188: 1, | S0390: 1, S3014: 1, | S0027: 1 and S0031: 1. |
|                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |                     |                     |                        |           | Phe-4 to Arg-11, |                     | Cys-31 to Cys-39.  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                      |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | •                   |                     |                        |           | 2912             |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | 4                      |           | 1 - 399          |                     |                    | •                   |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 137              |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |
|                     |                     |                     |                     |                     |                     |                     | -                   | •                   | -                   | -                   |                     |                        |           | 1047848          |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |
|                     | _                   |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                        |           | HMEJA45          |                     |                    |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | •                   |                     |                        |

|                    |                       | ,                       |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                       |                     |
|--------------------|-----------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----|-----------------------|---------------------|
|                    | -                     |                         | <del></del>         |                     | <u></u>             |                     |                     |                     | <u>.</u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | _                   |                     |                     | _                   |                     |     |                       |                     |
|                    |                       |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                       |                     |
| H0693: 636, H0637: | 29, H0551: 16, L0748: | 11, L0777: 7, H0069: 5, | L0666: 4, L0157: 3, | H0641:-3, L0766: 3, | L0665: 3, L0758: 3, | H0510: 2, H0615: 2, | H0509: 2, L0663: 2, | H0521: 2, L0751: 2, | L0755: 2, H0542: 2, | H0650: 1, H0657: 1, | S0356: 1, S0376: 1, | S0360: 1, H0431: 1, | H0013: 1, H0618: 1, | S0010: 1, H0581: 1, | T0001: 1, H0052: 1, | H0251: 1, H0596: 1, | H0373: 1, H0083: 1, | H0271: 1, S0250: 1, | S0003: 1, S0214: 1, | H0622: 1, H0553: 1, | H0674: 1, H0038: 1, | H0040: 1, H0272: 1, | H0059: 1, T0041: 1, | H0646: 1, L0598: 1, | L0662: 1, L0768: 1, | L0649: 1, L0774: 1, | ` 📑 | 1.0657: 1, 1.0517: 1, | L0382: 1, L0791: 1, |
| Asn-33 to Glu-41,  | Ala-58 to Ser-69,     | Ser-77 to Pro-84,       | Pro-97 to Pro-102,  | Ile-121 to Gln-128. |                     |                     | . ,                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                       |                     |
| 2913               |                       |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •   |                       |                     |
| 224 - 958          |                       |                         | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     | ,                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                       |                     |
| 738                |                       |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |     |                       |                     |
| 1047937            |                       |                         |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                       |                     |
| HLDAS11            |                       |                         |                     | 1                   | į                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |     |                       |                     |

|   | <del></del>   | · · · · · · · · · · · · · · · · · · ·   |
|---|---|---|
|   |   | 150250,<br>164500,<br>277730,<br>600971,<br>601226  |
|   |   | 3p14.3  |
| H0144: 1, S0126: 1,<br>H0690: 1, H0658: 1,<br>H0648: 1, S0152: 1,<br>S0146: 1, L0743: 1,<br>L0439: 1, L0754: 1,<br>L0749: 1, S0260: 1 and | S0358: 1  | L0593: 16, L0591: 12,<br>H0543: 9, L0667: 8,<br>L0751: 8, H0581: 7,<br>H0457: 7, H0617: 7,<br>L0659: 7, S0418: 6,<br>S0046: 6, H0494: 6,<br>S0206: 6, S0116: 5,<br>H0341: 5, H0402: 5,<br>S0222: 5, H0271: 5,<br>L0766: 5, H0521: 5,<br>S0027: 5, L0740: 5,<br>L0749: 5, L0595: 5,<br>S0360: 4, H0024: 4,<br>S0280: 4, H0024: 4,<br>H0551: 4, L0372: 4, |
|   | Ile-1 to Thr-7,<br>Glu-16 to Glu-33,<br>Leu-37 to Ala-46,<br>Leu-69 to Glu-80,<br>Tyr-89 to Gln-111,<br>Ser-121 to Cys-128,<br>Pro-135 to Glu-156,<br>Glu-162 to Thr-177. |   |
|   | 2914  | 2915  |
| ·   | 202 - 732   | 1480 - 185  |
|   | 739   | 740   |
|   | 1048009   | 1048188   |
| ·   | HWMJB31   | HAZAA31   |

|                     |                    |                     |                     |                     |                     |                     |                     |                     | •                   |                    | •                   |                     |                     |                     |                     |                                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |              |                     |                     |              |
|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------|---------------------|---------------------|--------------|
|                     |                    | ·                   |                     | _                   |                     |                     |                     |                     | <del></del>         |                    | _                   | _, .                |                     | <del></del>         |                     |                                       |                     |                     |                     |                     |                     | _                   |                     |                     |                     |              | _                   |                     |              |
| 519: 4.             | 656: 3,            | 356: 3,             | 052: 3,             | 050: 3,             | 051: 3,             | 135: 3,             | 475: 3,             | 769: 3,             | 663: 3,             | 014: 3,            | 777: 3,             | 424: 3,             | 556: 2,             | 657: 2,             | 376: 2,             | 007: 2,                               | 575: 2,             | 421: 2,             | 046: 2,             | 266: 2,             | 483; 2,             | 1413: 2,            | )561: 2,            | 771: 2,             | 775: 2,             | L0809: 2,    | 144: 2,             | 438: 2,             | H0555: 2,    |
| L0666: 4, H0519: 4. | H0542: 4, H0656: 3 | S0420: 3, S0356: 3, | S0045: 3, H0052: 3, | H0545: 3, H0050: 3, | H0620: 3, S0051: 3, | H0553: 3, H0135: 3, | T0042: 3, L0475: 3, | S0344: 3, L0769: 3, | L0654: 3, L0663: 3, | H0520: 3, S3014: 3 | L0439: 3, L0777: 3, | S0192: 3, S0424: 3, | H0265: 2, H0556: 2, | S0040: 2, H0657: 2, | H0484: 2, S0376: 2, | H0580: 2, S0007: 2,                   | H0333: 2, H0575: 2, | T0048: 2, H0421: 2, | S0049: 2, H0046: 2, | L0041: 2, H0266: 2, | H0615: 2, L0483; 2, | H0087: 2, H0413: 2, | H0059: 2, H0561: 2, | H0509: 2, L0771: 2, | L0649: 2, L0775: 2, | L0375: 2, L0 | L0665: 2, H0144: 2, | L0565: 2, L0438: 2, | H0658: 2, HC |
|                     |                    |                     |                     | :                   |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |              |                     |                     |              |
|                     |                    |                     | ·                   |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     | · ·                 | · · · · · · · · · · · · · · · · · · · |                     |                     | -                   |                     |                     |                     |                     |                     | -                   |              |                     |                     |              |
|                     |                    |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                                       |                     |                     |                     |                     |                     |                     | ···                 |                     |                     |              |                     |                     |              |
|                     |                    |                     |                     |                     |                     |                     | _                   | _                   |                     |                    |                     |                     |                     | 1.                  |                     |                                       |                     |                     |                     |                     |                     |                     |                     |                     | _                   | .,           |                     | <del>.</del>        |              |
|                     |                    |                     |                     |                     |                     |                     | -                   | _                   |                     |                    | <b></b>             |                     |                     |                     |                     | _                                     |                     |                     | <u>.</u>            |                     |                     |                     |                     |                     | _                   | ,            | ,                   |                     |              |

|                     |                     |                    |                    |                     |                 |                  |                     |                  |                  |                  |                  |                     |                    |                    |                    |                  |                  |                  |                  |                  |                  | _ <u></u>        |                  |                  |                  |                  |                  |                  | ·           |
|---------------------|---------------------|--------------------|--------------------|---------------------|-----------------|------------------|---------------------|------------------|------------------|------------------|------------------|---------------------|--------------------|--------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------|
|                     |                     |                    |                    |                     |                 |                  |                     |                  |                  |                  |                  |                     |                    |                    |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | -                |             |
|                     |                     |                    |                    |                     | •               |                  |                     |                  |                  |                  |                  |                     |                    |                    |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |
| -                   |                     |                    |                    |                     |                 | <u>,</u>         |                     |                  |                  |                  |                  |                     |                    |                    |                    |                  |                  | <u> </u>         | _                |                  |                  |                  |                  | _                | ····             |                  |                  | <u>·</u>         | _           |
| 0741: 2,            | 0754: 2,            | 0757: 2,           | 0445: 2,           | 0599: 2,            | 0002: 1,        | 0402: 1,         | 0049: 1,            | 0001:1,          | 10669: 1,        | I0663: 1,        | 10306: 1,        | 0358: 1,            | 0140: 1,           | I0393: 1,          | 0278: 1,           | 10610: 1,        | 10613: 1,        | 10497: 1         | 10256: 1,        | 10427: 1,        | 0346: 1,         | 10318:1,         | 10172: 1,        | .0471: 1,        | 0010: 1,         | 10687: 1         | 10284: 1         | 10428: 1         | H0181: 1    |
| S0037: 2, L0741: 2, | .0748: 2, L0754: 2, | .0745: 2, L0757: 2 | 0758: 2, H0445: 2, | .0596: 2, L.0599: 2 | 0601: 2, T0002: | 10686: 1, S0402: | 10294: 1, T0049: 1, | S0212: 1, S0001: | H0483: 1, H0669: | 10661: 1, H0663: | H0662: 1, H0306: | S0442: 1, S0358: 1, | H0637: 1, S0140: 1 | H0619: 1, H0393: 1 | .0717: 1, S0278: 1 | H0611: 1, H0610: | H0357: 1, H0613: | H0592: 1, H0497: | H0559: 1, H0256: | H0013: 1, H0427: | S0010: 1, S0346: | S0182: 1, H0318: | S0474: 1, H0172: | H0123: 1, L0471: | 30388: 1, T0010: | H0179: 1, H0687: | H0288: 1, H0284: | H0252: 1, H0428: | H0628: 1, F |
| 200                 | <u>9</u>            | 3                  | 3                  | 10                  | <u>Š</u>        | <u>E</u>         | HOH                 | 202              | H                | <u>H</u>         | H                | 20 <u>S</u>         | <u>H</u>           | HO                 | <u>6</u>           | H<br>H           | HOH              | H OH             | H                | <u>H</u>         | 20(              | 80               | <u>20</u>        | 즲                | SO               | H                | H                | HO               | E           |
|                     |                     |                    |                    |                     |                 |                  |                     |                  |                  |                  |                  |                     |                    |                    |                    |                  |                  |                  |                  |                  | •                |                  |                  |                  |                  |                  |                  |                  |             |
|                     |                     |                    |                    |                     | <u>.</u>        |                  |                     |                  |                  |                  | 1                |                     |                    |                    |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |
| <br> <br>           |                     |                    |                    |                     |                 |                  |                     |                  |                  |                  |                  |                     |                    |                    |                    |                  |                  |                  |                  |                  |                  |                  | · .              |                  |                  |                  |                  |                  |             |
|                     |                     |                    |                    |                     |                 |                  |                     |                  |                  |                  |                  |                     |                    |                    |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |
|                     |                     |                    |                    |                     |                 |                  |                     |                  |                  |                  |                  |                     | -                  |                    | -                  |                  |                  |                  | •                |                  | -                |                  |                  |                  |                  | -                |                  |                  |             |
|                     |                     |                    |                    |                     |                 |                  |                     | -                |                  |                  |                  |                     | _                  |                    |                    | -                |                  |                  |                  |                  | -                |                  |                  |                  |                  | _                |                  |                  |             |
|                     |                     |                    |                    |                     |                 |                  |                     |                  |                  |                  |                  |                     |                    |                    |                    | *                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |
|                     |                     |                    |                    |                     |                 |                  |                     |                  |                  |                  |                  |                     |                    |                    |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |
|                     |                     |                    |                    |                     |                 |                  |                     |                  |                  |                  |                  |                     |                    |                    |                    |                  |                  |                  | _                |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |

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|--------------|-----------|--------------|---------------------|---------------------|---------------------|------------------|------------------|-------------|---------------|--------------|-----------|----------------------|-----------|-------------|---------------------|------------------|-----------|---------------------|---------------------|---------------------|-------------|---------------------|---------------------|---------------------|------------------|------------------|---------------------|------------------------|---------------------------------|
| 1, L0055: 1, | H0090: 1, | 1, T0067: 1, | H0412: 1, H0100: 1, | H0560: 1, H0130: 1, | H0647: 1, H0646: 1, | 80210: 1,        | H0529: 1,        | , L0770: 1, | L0796: 1,     | I, L0643: 1, | L0764: 1, | .0773: 1, L.0662: 1, | L0774: 1, | , L0658: 1, | .0383: 1, L0382: 1, | L0664: 1,        | H0689: 1, | H0690: 1, H0682: 1, | H0435: 1, H0670: 1, | H0660: 1, H0666: 1, | , 50378: 1, | .0602: 1, H0134: 1, | H0436: 1, L0750: 1, | .0755: 1, S0031: 1, | L0608: 1,        | H0653: 1,        | H0665: 1, H0667: 1, | H0217: 1 and H0352: 1. | H0253: 8, H0618: 6,             |
| H0606: 1     | H0124: 1, | H0040: 1     | H0412: 1            | H0560: 1            | H0647: 1            | S0142: 1, S0210: | S0002: 1, H0529: | L0535: 1,   | 1.0638: 1,    | L0637: 1, 1  | L0374: 1, | L0773: 1,            | L0768: 1, | L0378: 1,   | L0383: 1,           | L0791: 1, L0664: | S0126: 1, | H0690: 1            | H0435: 1            | H0660: 1            | L0355: 1,   | L0602: 1,           | H0436; 1            | 1,0755: 1,          | S0436: 1, L0608: | S0026: 1, H0653: | H0665: 1            | H0217: 1               | 2916 Gln-116 to Trp-124, H0253: |
|              |           |              |                     |                     | -                   |                  |                  |             |               |              |           |                      |           |             |                     |                  |           |                     |                     |                     |             |                     |                     |                     |                  |                  |                     | •                      | 2916                            |
|              |           | <u></u>      |                     |                     |                     |                  |                  |             | · <del></del> |              |           |                      | - !       |             |                     |                  |           | •                   |                     |                     |             |                     |                     |                     |                  |                  |                     |                        | 56 - 1465                       |
|              |           |              |                     |                     |                     |                  |                  |             |               |              |           |                      |           |             |                     |                  |           |                     |                     |                     |             |                     |                     |                     |                  |                  |                     |                        | 741                             |
|              |           |              |                     |                     |                     |                  |                  | ,           |               |              |           |                      |           |             |                     |                  |           |                     |                     |                     |             |                     |                     |                     |                  |                  |                     |                        | 1048300                         |
|              |           |              |                     |                     |                     |                  |                  |             | <u> </u>      | <del></del>  |           |                      |           |             |                     |                  |           |                     |                     |                     |             |                     |                     |                     |                  |                  | <del></del>         |                        | HOCMC83                         |

|  | 116806,<br>120120,<br>120120,<br>120120,  |
|--|---|
|  | 3p21.3  |
|  | AR060: 241, AR033:<br>229, AR055: 211,<br>AR061: 142, AR089:<br>103, AR053: 85, |
| Glu-154 to Glu-161, Glu-270 to Asn-278, Glu-360 to Trp-371, Asp-440 to Asp- 445, Ser-450 to Leu-456. | Leu-21 to Gly-27,<br>Pro-73 to Leu-83.  |
|  | 2917  |
|  | 2 - 1330  |
|  | 742   |
|  | 1048427   |
|  | HCFCS40   |

| 120436,<br>120436,                         | 120436, | 138320,              | 168468,             | 182280,             | 600163             |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|--|---------|----------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| AR052: 62, AR104:<br>48, AR096: 33, AR039: |         | S0474: 21, H0683: 7, | .0748: 7, H0251: 6, | .0777: 5, S0422: 4, | 0764: 4, L0766: 4, | .0740: 4, L0754: 4, | S0418: 3, H0046: 3, | H0553: 3, H0521: 3, | .0779: 3, L0752: 3, | .0731: 3, L0757: 3, | H0422: 3, H0713: 2, | H0717: 2, H0733: 2, | S0476: 2, H0441: 2, | H0575: 2, H0428: 2, | H0494: 2, L0659: 2, | .0666: 2, H0547: 2, | H0519: 2, L0439: 2, | .0745: 2, L0749: 2, | .0756: 2, L.0758: 2, | .0485: 2, S0026: 2, | S0384: 2, H0716: 1, | S0212: 1, H0661: 1, | S0356: 1, S0444: 1, | S0045: 1, S0046: 1, | S0132: 1, H0645: 1, | H0406: 1, S6022: 1, | H0431: 1, H0587: 1, | H0486: 1, T0040: 1, |
| A 48                                       | 25      | S                    | <u>3</u>            | <u> </u>            | <u> </u>           |                     | <u> </u>            | <b>当</b>            | <u>고</u>            | <u> </u>            | 王                   | Ħ                   | )S                  | H                   | <u>H</u>            | <u> </u>            | H                   | <u> </u>            | <u> </u>             | <u> </u>            | SC                  | ) <u>S</u>          | ) <u>S</u>          | ) <u>S</u>          | 28                  | Ĭ                   | H                   | H                   |
|  |         |                      |                     |                     | -                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|-----------------------|---------------------|---------------------|---------------------|
|  |                     | •                   |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                        |           |                       |                     |                     |                     |
| H0013: 1, H0069: 1,<br>H0156: 1. H0098: 1. | H0581: 1, H0150: 1, | H0024: 1, H0083: 1, | S0025: 1, H0355: 1, | H0328: 1, H0031: 1, | H0124: 1, T0067: 1, | H0413: 1, H0623: 1, | H0560: 1, L0769: 1, | L0667: 1, L0372: 1, | L0767: 1, L0803: 1, | L0804: 1, L0774: 1, | L0775: 1, L0375: 1, | L0784: 1, L0655: 1, | L0657: 1, L0783: 1, | L0647: 1, L5622: 1, | L5623: 1, L0664: 1, | H0697: 1, S0374: 1, | H0724: 1, H0520: 1, | H0435: 1, H0710: 1, | H0518: 1, S0152: 1, | L0751: 1, L0759: 1, | S0031: 1, H0445: 1, | S0434: 1, S0436: 1, | S0192: 1, S0424: 1 and | L0600: 1. | S0440: 12, H0543: 11, | H0341: 7, L0775: 6, | L0591: 6, L0770: 5, | =                   |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | -                   |                        |           | Trp-1 to Gly-10,      | Gly-22 to Gly-29,   | Leu-82 to Val-88,   | Ala-116 to His-123, |
|  |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2918                  |                     |                     |                     |
| :  |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1042 - 212            |                     |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 743                   |                     |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1048595               |                     |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                        |           | HVCAA65               |                     |                     |                     |

|  |  |   |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |
|--|--|---|--------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
|  |  |   |                                      |                     |                     | -                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | · ·                 |                     |                      |
| .0759: 5, L0588: 5,                    | 10542: 5, S0360: 4,                    | 10045: 4, H0486: 4,                     | 10012: 4, S0372: 4,                  | S0144: 4, L0755: 4, | .0731: 4, L0758: 4, | .0596: 4, S0114: 3, | H0657: 3, S0132: 3, | H0640: 3, H0545: 3, | H0266: 3, H0413: 3, | H0494: 3, L0598: 3, | H0529: 3, L0521: 3, | .0364: 3, L0657: 3, | .0783: 3, L0809: 3, | .0666: 3, L0665: 3, | H0547: 3, H0519: 3, | S0126: 3, H0659: 3, | H0670: 3, L0777: 3, | S0436: 3, L0595: 3, | H0395: 2, H0265: 2, | 70049: 2, H0484: 2, | H0402: 2, H0125: 2, | S0418: 2, S0408: 2, | S0410: 2, H0580: 2, | 70109: 2, H0575: 2, | H0581: 2, H0546: 2, | H0373: 2, H0510: 2, | H0708: 2, H0412: 2, | H0396: 2, L0763: 2, | .0769: 2, L.0774: 2, |
| Lys-144 to Phe-156, L0759: 5, L0588: 5 | Phe-167 to Thr-181, H0542: 5, S0360: 4 | Glu-202 to Asp-207, S0045: 4, H0486: 4, | Glu-262 to Ser-277. H0012: 4, S0372: | S                   |                     |                     |                     | <u>i-L-i</u>        | <u>i4</u>           | <u> </u>            |                     |                     |                     | <del></del>         | <u>. 441</u>        | S                   | <del>111</del>      | S                   | <u>.</u>            |                     | <u></u>             | S                   | S                   |                     | <u>, 14,</u>        | <u>. —</u>          | <u>, 11</u>         | <u>, 144 - </u>     |                      |
|  |  |   |                                      |                     |                     |                     |                     | •                   |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |
|  |  |   |                                      |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | -                   |                     | _                   | -                   |                     |                     |                     |                     |                     |                     | ·                   | ·<br>               |                     |                     |                      |
|  |  |   |                                      | <del></del>         |                     | -                   | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |
| <u> </u>                               |  |   |                                      |                     |                     | -                   |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     | _                   |                     |                     |                     |                     |                     |                     |                      |
|  |  |   |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |

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|---------------------|---------------------|---------------------|-------------|---------------------|---------------------|---------------------|---------------------|-------------|----------------------|--------------------|--------------------|------------------|-----------|------------------|------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|-----------|------------------|------------------|-----------|
|                     |                     |                     |             |                     |                     |                     |                     |             |                      |                    |                    |                  |           | •                |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
|                     |                     |                     |             |                     |                     |                     |                     | •           |                      | •                  |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
|                     |                     | <u> </u>            |             |                     |                     |                     | _                   |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
|                     |                     |                     |             |                     |                     |                     |                     |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
| -                   |                     |                     |             | <u> </u>            |                     |                     |                     |             |                      |                    |                    |                  |           | <u>·</u>         | ·          |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
| 2,                  | 2,                  |                     | 2,          |                     | 4                   | 2,                  | .;<br>ć             | .,          | .,<br>,              | .,                 | . 2,               | .;<br>1,         | : 1,      | ): 1 <b>,</b>    | . <u>.</u> | : 1,             | : I,             | 1,               | 2: 1,            | 7: 1,            | . 1,             | : 1,             | : 1,             |                  | .1,       | 7: 1,     | : 1,             | i: 1,            | : 1,      |
| .0805: 2, L0653: 2, | .0776: 2, L0655: 2, | .0513: 2, L0656: 2, | L0517: 2,   | H0666: 2, H0672: 2, | S0328: 2, S0044: 2, | S0406: 2, L0751: 2, | .0747: 2, L0757: 2, | L0581: 2,   | .0599: 2, L.0604: 2, | S0026: 2, H0653: 2 | H0422: 2, H0506: 2 | H0556: 1, T0002: | , H0295:  | H0583: 1, H0650: | H0483:     | H0305: 1, S0420: | S0356: 1, H0675: | S0046: 1, S6022: | H0432: 1, H0392: | H0586: 1, H0497: | H0333: 1, H0331: | H0250: 1, S0280: | .0021: 1, H0599: | H0042: 1, T0082: | T0048:    | H0597:    | .0738: 1, H0178: | H0123: 1, H0081: | 1, H0620: |
| 5: 2, I             | 5: 2, I             | 3: 2, I             | .0558: 2, I | 6: 2, I             | 3: 2, S             | 5: 2, L             | 7:2,1               | .0597: 2, I | 3: 2, I              | 5: 2, F            | 2: 2, I            | 6: 1, 7          | 6: 1, I   | 3: 1, I          | 3: 1, F    | 5: 1, 5          | 5: 1, F          | 5: 1, S          | 2: 1, 1          | 6: 1, I          | 3: 1, I          | 0:1,5            | l: 1, F          | 2: 1, 7          | ): 1, T   | 2: 1, I   | 8: 1, F          | 3: 1, 1          | l: 1, F   |
| T080;               | 1,077               | 1.0513              | L0558       | H066                | S0328               | S0406               | 1074                | L059        | L0599                | S0026              | H042               | H055             | H0686: 1, | H058             | S0298: 1,  | H030             | S035             | S004             | H043             | H058             | H033             | H025             | L002             | H004             | S0010: 1, | H0052: 1, | L073             | H012             | L0471:    |
|                     |                     |                     |             |                     |                     |                     |                     |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
|                     |                     |                     |             | •                   |                     |                     |                     |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
|                     |                     |                     |             |                     |                     |                     |                     |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
|                     |                     |                     |             |                     |                     |                     |                     |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
|                     |                     |                     |             |                     |                     |                     |                     |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
|                     |                     |                     |             |                     |                     |                     | -                   |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  | _                |                  |           |           |                  | <del></del>      |           |
|                     |                     |                     |             |                     |                     |                     |                     |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
| -                   |                     |                     |             | _                   |                     |                     | -                   |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
|                     |                     |                     |             |                     |                     |                     |                     |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
| j                   |                     |                     |             |                     |                     |                     |                     |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
|                     |                     |                     |             |                     |                     |                     |                     |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
| -                   |                     | _                   |             |                     |                     |                     |                     |             |                      |                    |                    | . —              |           |                  |            | _                |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
|                     |                     |                     |             |                     |                     |                     |                     |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |
|                     |                     |                     |             |                     |                     |                     |                     |             |                      |                    |                    |                  |           |                  |            |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |           |                  |                  |           |

| Γ                   |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | · · · ·             |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                        |                     |   |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---|
|                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 121050,             | 131400,                                 |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                        | 5q31                |   |
| H0071: 1, H0355: 1, | H0687: 1, S0022: 1, | H0039: 1, T0006: 1, | H0031: 1, H0628: 1, | H0135: 1, H0038: 1, | H0087: 1, H0264: 1, | Γ0042: 1, S0016: 1, | H0560: 1, H0509: 1, | H0633: 1, H0649: 1, | S0142: 1, S0344: 1, | S0208: 1, S0422: 1, | L0520: 1, L0762: 1, | L3904: 1, L0667: 1, | L0771: 1, L0768: 1, | L0381: 1, L0784: 1, | L0652: 1, L0559: 1, | L0636: 1, L0540: 1, | L0518: 1, L0384: 1, | S0374: 1, H0723: 1, | H0690: 1, H0660: 1, | H0648: 1, S0380: 1, | S0152: 1, H0521: 1, | H0522: 1, H0555: 1, | S0392: 1, S0027: 1, | S0028: 1, S0206: 1, | L0743: 1, L0779: 1, | L0780: 1, L0753: 1, | H0707: 1 and H0712: 1. | S0250: 4, H0551: 4, | S0360: 3, H0013: 3,                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Phe-1 to Pro-12,    | Asp-182 to Pro-188, S0360: 3, H0013: 3, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     | _                   |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2919                |   |
|                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 85 - 1578           |   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 744                 |   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1048635             |   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                        | HSPSI76             |   |

| 740,                                    | 53455,                                  | ,000                | 179095,                              | 160,                | 192974,                              | 74,                 | 307,                                 | 96,                 | 592,             | 592,             | 592,         | 592,             | )86,          | 121,            | 160              | -                |                  |              |                    |              |           |                     |                    |                    |                     |                     |                    |                    |                    |
|---|---|---------------------|--------------------------------------|---------------------|--------------------------------------|---------------------|--------------------------------------|---------------------|------------------|------------------|--------------|------------------|---------------|-----------------|------------------|------------------|------------------|--------------|--------------------|--------------|-----------|---------------------|--------------------|--------------------|---------------------|---------------------|--------------------|--------------------|--------------------|
| 138040,                                 | 1534                                    | 159000,             | 1790                                 | 181460,             | 1929                                 | 192974              | 600807,                              | 601596              | 601692,          | 601692,          | 601692,      | 601692,          | 602089,       | 602121,         | 602460           |                  |                  |              |                    |              |           | 33                  |                    |                    |                     |                     |                    |                    | _                  |
|   |   |                     |                                      |                     | _                                    |                     |                                      |                     |                  |                  |              | ····             |               |                 |                  |                  |                  |              |                    |              |           | 22q13.33            |                    |                    |                     |                     | -,                 |                    |                    |
| 628: 2,                                 | 14: 2,                                  | 12: 1,              | 120: 1,                              | )46: 1,             | 497: 1,                              | 544: 1,             | 024: 1,                              | 544: 1,             | 040: 1,          | 294: 1,          | , S0144: 1,  | 305: 1,          | L5623: 1,     | 144: 1,         | 126: 1,          | 672: 1,          | 521: 1,          | 1, S0037: 1, | 588: 1,            | L0601: 1 and |           | 3759: 4,            | 376: 3,            | 749: 3,            | 535: 2,             | 806: 2,             | 566: 2,            | 218: 1,            | 354: 1,            |
| Arg-215 to Tyr-224, H0295: 2, H0628: 2, | Gly-240 to Lys-247, L0776: 2, S3014: 2, | L0439: 2, S0212:    | Leu-295 to Glu-308, S0418: 1, S0420: | H0734: 1, S0046:    | Thr-343 to Arg-349, S0476: 1, H0497: | T0040: 1, H0544:    | Lys-369 to Asp-375, H0545: 1, H0024: | S0003: 1, H0644:    | H0038: 1, H0040: | H0413: 1, S0294: | H0633: 1, S0 | .0372: 1, L0805: | .0654: 1, L.S | 4501: 1, H0144: | .0438: 1, S0126: | H0683: 1, H0672: | H0539: 1, H0521: | H0631: 1, S0 | S0434: 1, L0588: 1 | 0599: 1, L0  | H0665: 1. | L0769: 5, L0759: 4, | H0402: 3, S0376: 3 | H0424: 3, L0749: 3 | S0222: 2, L0535: 2, | .0774: 2, L0806: 2, | .0384: 2, L0666: 2 | H0265: 1, S0218: 1 | H0484: 1, S0354: 1 |
| Tyr-224, H                              | Lys-247, L                              | 3ly-286, L          | Glu-308, S(                          | lyr-331, H          | Arg-349, St                          | Ala-360, T          | Asp-375,H                            | Asp-432. St         | <u>=</u>         | 工                | 田            | Þ                | <del>ப</del>  | 乛               |                  | <u> </u>         | 王                | <u> </u>     | Š                  | <u>ਜ</u>     | <u>E</u>  |                     | <u> </u>           | <u>II</u>          | <u>~</u>            | Ħ                   | <u></u>            | <u> </u>           | H.                 |
| Arg-215 to                              | Gly-240 to                              | Pro-279 to Gly-286, | Leu-295 to:                          | Pro-326 to Tyr-331, | Thr-343 to                           | Tyr-354 to Ala-360, | Lys-369 to                           | Ser-426 to Asp-432. |                  |                  |              |                  |               |                 |                  |                  | ,                |              |                    | ٠            |           | Ser-45 to Pro-51    |                    |                    | •                   |                     |                    |                    |                    |
|   |   | •                   |                                      |                     | <u>-</u>                             |                     |                                      |                     |                  |                  |              |                  |               |                 |                  |                  |                  |              |                    |              |           | 2920                |                    |                    |                     |                     |                    | _                  |                    |
|   |   |                     |                                      |                     |                                      |                     |                                      |                     |                  |                  |              |                  |               |                 | •                |                  |                  | ,            |                    |              |           | 1107 - 91           |                    |                    | _                   |                     |                    |                    |                    |
|   |   |                     |                                      |                     |                                      |                     |                                      |                     |                  |                  |              |                  | \$            |                 |                  |                  |                  |              |                    |              |           | 745                 |                    |                    |                     |                     |                    |                    |                    |
|   |   |                     |                                      |                     |                                      |                     |                                      |                     |                  |                  |              |                  | ,             |                 |                  |                  |                  |              |                    |              |           | 1048658             |                    |                    |                     |                     |                    |                    |                    |
|   |   |                     |                                      | ····                |                                      |                     |                                      |                     |                  |                  |              | ***              |               |                 |                  |                  |                  |              |                    |              |           | HVVCH35             |                    |                    |                     |                     |                    |                    |                    |

|                     | <del></del>         |          |    |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                        |                      |                     |                     |                     |                     |                     |
|---------------------|---------------------|----------|----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     | <u>.</u> |    |                     | <del>.</del>        |                     | <u>.</u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     | <br>                    |                     | <del></del>         |                     |                     |                        |                      |                     |                     |                     |                     |                     |
| S0444: 1, S0360: 1, | S0007: 1, H0392: 1, | J,       | Ŧ, | L0021: 1, H0004: 1, | H0581: 1, H0052: 1, | H0194: 1, H0204: 1, | H0024: 1, H0405: 1, | H0617: 1, H0606: 1, | H0090: 1, H0272: 1, | H0494: 1, S0438: 1, | S0422: 1, S0002: 1, | L0770: 1, L0772: 1, | L0372: 1, L0641: 1, | L0645: 1, L0771: 1, | L0768: 1, L0794: 1, | L0381: 1, L0775: 1, | <br>H0659: 1, H0658: 1, | H0672: 1, H0521: 1, | S0406: 1, H0727: 1, | L0744: 1, L0779: 1, | L0758: 1, H0445: 1, | H0423: 1 and H0422: 1. | L0740: 10, L0752: 9, | L0748: 8, S0422: 6, | S0440: 5, L0666: 5, | L0754: 5, S0360: 4, | H0327: 4, L0771: 4, |                     |
|                     |                     |          |    |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                         |                     | -                   | -                   |                     |                        | Thr-1 to Asp-9,      | Gly-18 to Ser-24,   | Asn-35 to Arg-42,   | Trp-49 to Asp-62,   | Ser-69 to Ala-74,   | Arg-155 to Trp-167, |
|                     |                     |          |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                        | 2921                 |                     |                     |                     |                     |                     |
|                     |                     |          |    |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                        | 3 - 710              |                     |                     |                     |                     |                     |
|                     |                     |          |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                         |                     |                     |                     |                     |                        | 746                  |                     |                     |                     |                     |                     |
|                     |                     | •        |    |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                         | _                   |                     | ,                   |                     |                        | 1048739              |                     |                     | ,                   |                     |                     |
|                     |                     |          |    |                     |                     |                     |                     |                     |                     |                     |                     |                     | `                   |                     |                     |                     |                         |                     |                     |                     |                     |                        | HOFNI66              |                     |                     |                     |                     |                     |

|   |   |                     |                     |                     |                      | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                 |
|---|---|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------|
|   |   |                     |                     |                     | ٠                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                      |                     |                     |                     |                     |                     |                 |
|   |   |                     |                     |                     |                      |                     |                     |                     | _                   |                     |                     | - <del>:</del>      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                 |
|   |   |                     |                     |                     |                      |                     |                     |                     | _                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     | <u>.</u>            |                     |                     |                      |                     |                     |                     | -                   |                     |                 |
| Leu-173 to Tyr-180, S0406: 4, L0779: 4, | Arg-190 to Ala-197. L0596: 4, S0444: 3, | Г0109: 3, H0575: 3, | S0003: 3, L0805: 3, | .0776: 3, L0809: 3, | .0664: 3, L.0665: 3, | 30328: 3, H0696: 3, | ,0439: 3, L0755: 3, | .0731: 3, H0543: 3, | H0657: 2, H0662: 2, | S0420: 2, S0356: 2, | S0358: 2, S0408: 2, | S0007: 2, H0415: 2, | S0010: 2, H0046: 2, | H0014: 2, H0083: 2, | H0032: 2, H0674: 2, | HO708: 2, H0090: 2, | H0038: 2, H0272: 2, | H0429: 2, H0494: 2, | S0372: 2, S0438: 2, | H0509: 2, L0598: 2, | .0766: 2, L0649: 2, | .0774: 2, L0775: 2, | .0543: 2, L.5622: 2, | .0663: 2, H0144: 2, | S0378: 2, L0602: 2, | H0522: 2, S0028: 2, | .0758: 2, L0588: 2, | .0599: 2, S0026: 2, | F. 2, H0170: 1, |
| 0, 80406                                | 7. 1.0596                               | T0105               | 20003               | 1.0776              | 79907                | S0328               | L0439               | L0731               | H065                | S0420               | S0358               | 20007               | S001C               | H001                | H003;               | H070                | H003                | H042                | S0372               | H050                | T0766               | L0774               | L0542                | F0663               | S0378               | H052                | 1.0758              | 1059                | S0424: 2,       |
| to Tyr-18                               | to Ala-19                               |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                 |
| Leu-173                                 | Arg-190                                 |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                 |
|   |   |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     | ,                   |                     |                     |                     |                 |
|   |   |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                 |
| _                                       |   |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                 |
|   |   |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                 |
| <br>                                    |   |                     | ····                |                     |                      |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                 |
|   |   |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     | -18                 |                     | _                   |                     |                 |

|                  |              |                  | _                |            |                  | ·           |            | _        | _        |          |            |          | _        |            |          |                  |          |            |          |                  |       | _        |                  |          | _         | _                |                  |                  |                  |
|------------------|--------------|------------------|------------------|------------|------------------|-------------|------------|----------|----------|----------|------------|----------|----------|------------|----------|------------------|----------|------------|----------|------------------|-------|----------|------------------|----------|-----------|------------------|------------------|------------------|------------------|
|                  |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  | •        |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
|                  |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
|                  |              |                  |                  |            |                  |             | ·<br>      |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  | <del>.</del>     |                  |                  |
|                  |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
|                  |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  | •                |                  |                  |
|                  |              |                  | _                |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
| 1,               | <u>.</u> _ ر | 1,               | 1,               |            | 1,               | T,          | 1,         | 1,       | 1,       | Ţ,       | 1,         | I,       | 1,       | 1,         |          | <del></del>      | ᅼ        | 1,         | T,       | 1,               | l,    | 1,       | 7,               | Ţ,       | j,        | ļ,               | 1,               | 1,               | Ļ                |
| 717:             | 16:          | 212:             | 458:             | 76:        | 730:             | 45:         | 519:       | L0717: 1 | 369:     | 431:     | , H0586: 1 | H0574:   | H0486: 1 | L0586: 1   | 250:     | 156:             | , H0274: | 581:       | , H0251: | 545:             | 123:  | S0214:   | 031:             | , H0598: | 135:      | 616:             | 264:             | 059:             | 475:             |
| , HO             | , S01        | , SO             | , HO             | 1, \$0376: | , H0             | 1, S0045: 1 | , HO       | ,10      | , H0     | , H0     | , H0       | , H0     | , H0     | ,10,       | , HO     | , H0             | , НО     | l, H0581:  | , H0     | , HO             | , H0  | , S0     | , H0             | H,       | l, H0135: | , H0             | , H0             | .H0              | Š,               |
| L0615: 1, H0717: | 14:1         | H0341: 1, S0212: | H0663: 1, H0458: | 30354: 1   | H0580: 1, H0730: | H0733: 1    | 30046: 1   | H0393: 1 | H0351: 1 | H0549: 1 | H0409: 1   | H0587: 1 | H0632: 1 | Γ0039: 1   | 60: 1    | 10635: 1, H0156: | 10042: 1 | [0048: 1   | 10421: 1 | .0040: 1, H0545: | 99: 1 | H0373: 1 | 10328: 1, H0031: | H0553: 1 | H0534: 1  | H0591: 1, H0616: | H0063: 1, H0264: | H0412: 1, H0059: | H0100: 1, L0475: |
| 907              | S01          | H03              | 90H              | S03;       | H05              | H07         | <u>200</u> | H03      | H03      | H05      | H04        | H05      | H06      | 100<br>100 | <u> </u> | 90H              | H00      | <u>100</u> | H04      | 9                | H00   | H03      | H03              | H05      | H05       | H05              | <u>H</u> 00      | H04              | H01              |
|                  |              |                  |                  |            | ,                |             |            |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
|                  |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
|                  |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          | •                |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
|                  |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          | •          |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
| <u> </u>         |              |                  |                  |            |                  |             | _          |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
|                  |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          |            |          | •                |       |          |                  |          |           |                  |                  |                  |                  |
| H                |              |                  |                  |            |                  | -           |            |          |          |          |            |          |          | _          |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  | ·                |                  |
|                  |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
| _                |              | ·<br>            |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
| İ                |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  | ·                |                  |
|                  |              |                  | _                | _          |                  |             |            | -        | *        |          |            |          |          |            |          |                  |          |            |          |                  |       | 100      |                  |          |           |                  |                  |                  |                  |
|                  |              |                  |                  |            |                  |             |            | ٠        |          |          |            |          | •        |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
|                  |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
| <u> </u>         |              |                  |                  |            |                  |             |            |          |          |          |            |          | _        |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
|                  |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
|                  |              |                  |                  |            |                  |             |            |          |          |          |            |          |          |            |          |                  |          |            |          |                  |       |          |                  |          |           |                  |                  |                  |                  |
|                  |              |                  |                  |            |                  |             | _          |          |          |          |            |          |          |            |          |                  |          | _          |          |                  |       |          |                  |          |           |                  |                  |                  |                  |

|                     |                     |              | <u></u>             |                     |                     | •••                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |         |             |                     |
|---------------------|---------------------|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------|-------------|---------------------|
|                     | <u>.</u>            | ·            |                     |                     |                     | •                   |                     |                     |                     | -                   |                     |                     |                     | •                   | -                   |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                        |         | <del></del> |                     |
| H0560: 1, H0561: 1, | S0352: 1, S0382: 1, |              | S0210: 1, L0763: 1, | L0769: 1, L0638: 1, | L0637: 1, L5565: 1, | L0772: 1, L0372: 1, | L0800: 1, L0648: 1, | L0662: 1, L0767: 1, | L0768: 1, L0806: 1, | L0655: 1, L0629: 1, | L0658: 1, L0517: 1, | L0526: 1, L0529: 1, | L0532: 1, H0698: 1, | H0520: 1, H0547: 1, | H0519: 1, H0690: 1, | H0682: 1, H0659: 1, | H0658: 1, H0670: 1, | H0539: 1, S0380: 1, | S0152: 1, H0521: 1, | H0704: 1, H0478: 1, | S3014: 1, S0032: 1, | L0749: 1, L0750: 1, | L0756: 1, L0757: 1, | H0445: 1, S0434: 1, | L0608: 1, H0668: 1, | S0194: 1 and H0423: 1. |         |             | AR104: 2, AR061: 1, |
|                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |         |             |                     |
|                     | •                   |              |                     |                     | -                   | **                  |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2922    | -           | •                   |
|                     |                     | <del>-</del> |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | لنداسي              |                     |                     |                     | _                   |                     |                     | ***                 |                     |                     |                        | 1432 -  | 1770        |                     |
|                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                        | 747     |             |                     |
|                     |                     |              |                     |                     |                     | `                   |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   | _                   |                     |                     |                     |                        | 1048792 | •           |                     |
|                     |                     |              |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HMSKI90 |             |                     |

|                     |          |                        |                   |                       |                      |                     |                     | - | ·                     |                   |                     |                   |                     |                     |                  |                     |                  |                     |                     | ł                |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|----------|------------------------|-------------------|-----------------------|----------------------|---------------------|---------------------|---|-----------------------|-------------------|---------------------|-------------------|---------------------|---------------------|------------------|---------------------|------------------|---------------------|---------------------|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| AR053: 0, AR055: 0, | AR039: 0 | H0171: 1, S0444: 1 and | AR089: 15, AR096: | 14, AR060: 12, AR039: | 10, AR104: 8, AR053: | 8, AR055: 4, AR033: | 4, AR061: 3, AR052: |   | L0777: 17, H0521: 11, | .47: 6, L0649: 5, | H0586: 4, L0664: 4, | '48: 4, L0749: 4, | H0661: 3, S0132: 3, | H0587: 3, H0509: 3, | 37: 3, L0662: 3, | .0806: 3, L0665: 3, | 79: 3, S0358: 2, | L0717: 2, T0040: 2, | H0014: 2, H0494: 2, | 38: 2, L0451: 2, | H0547: 2, H0435: 2, | H0658: 2, H0648: 2, | H0672: 2, L0602: 2, | S0436: 2, H0543: 2, | .0448: 1, S0476: 1, | H0431: 1, H0592: 1, | [0114: 1, L0021: 1, | r0010: 1, H0188: 1, |
| AR                  | AR       | )H                     |                   | 14,                   | 10,                  | 8,4                 | 4,4                 | 2 | <u> </u>              | 207               | )OH                 | 101               | OH                  | OH                  | <u> </u>         | 307)<br>—           |                  |                     | )OHI                | 804              | 0H                  | HOC                 | )OH                 | 804                 | 707                 | OH HO               | <u>T</u> 01         | roc                 |
|                     |          | •                      | 2 - 805 2923      |                       |                      |                     |                     |   |                       |                   |                     |                   | -                   |                     |                  | -                   | -                |                     |                     |                  |                     |                     |                     |                     |                     | <del>.</del>        | ·                   | _                   |
|                     |          |                        | 748               |                       |                      |                     |                     |   |                       |                   |                     |                   |                     |                     |                  |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     | -                   |
|                     |          |                        | 1049151           |                       |                      |                     |                     |   |                       |                   |                     |                   |                     |                     |                  |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |          |                        | HSYBI49           |                       |                      |                     |                     |   |                       |                   |                     |                   |                     |                     |                  |                     |                  |                     |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |

| T0023: 1, L0483: 1, H0551: 1, S0352: 1, H0633: 1, L0763: 1, L0763: 1, L0646: 1, L0648: 1, L4500: 1, L5568: 1, L0774: 1, L0775: 1, L0525: 1, L0657: 1, H0690: 1, H0684: 1, S0378: 1, H0479: 1, L0754: 1, L0755: | Thr-34 to Glu-47, S0422: 31, L0748: 16, Pro-82 to Ser-104, L0803: 12, H0580: 11, His-120 to Asn-126, H0615: 10, L0754: 9, His-129 to Pro-152, L0596: 9, S0360: 8, Cys-214 to Lys-220, L0805: 8, L0779: 8, Lys-261 to Ser-268. L0663: 7, L0745: 7, S0358: 6, H0271: 6, L0766: 6, L0777: 6, S0406: 6, L0777: 6, S0406: 6, L0777: 5, L0761: 5, L0771: 5, L0761: 5, L0771: 5, L0662: 5, L0771: 5, L0662: 5, L0770: 5, H0436: 5, L0750: 5, H0542: 5, S0444: 4, S0476: 4, H0547: 4, R0547: 4, R0547: 4, R0547: 4, R0547: 4, R0547: 4, R0547: 4, R0547: 4, R0547: 4, R0547: 4, R0547: 4, R0547: 4, R0548: 4, R0547: 4, R054 |
|--|--|
|  | Thr-34 to Glu-47, Pro-82 to Ser-104, His-120 to Asn-126, His-129 to Pro-152, Cys-214 to Lys-220, Lys-261 to Ser-268.   |
| ,  | 2924   |
|  | 1061 -<br>1864   |
|  | 749  |
|  | 1049372  |
|  | HTXSN37  |

|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         | <u>.</u>            |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | <del></del>         |                     |                     |                     | :                   |                     | •                   |                     |                     | _                   |                     |                     |                     |
| S0126: 4, H0648: 4, | S0404: 4, S0434: 4, | .0599: 4, H0543: 4, | H0624: 3, H0224: 3, | S0114: 3, S0116: 3, | S0442: 3, H0549: 3, | H0618: 3, H0620: 3, | H0616: 3, H0264: 3, | H0494: 3, S0002: 3, | .0646: 3, L0764: 3, | .0794: 3, L0804: 3, | .0776: 3, L0783: 3, | J0792: 3, S0374: 3, | H0659: 3, H0521: 3, | J0747: 3, L0756: 3, | .0755: 3, L0758: 3, | H0506: 3, H0341: 2, | H0619: 2, H0645: 2, | H0574: 2, T0060: 2, | H0013: 2, H0156: 2, | H0599: 2, S0474: 2, | H0052: 2, H0251: 2, | H0009: 2, S6028: 2, | H0028: 2, H0428: 2, | H0622: 2, H0553: 2, | H0135: 2, H0090: 2, | H0038: 2, H0634: 2, | .0065: 2, H0509: 2, | S0344: 2, S0426: 2, | .0769: 2, L0637: 2, |
| S                   | S                   | <u> </u>            | <u>H</u>            | <u> </u>            | <u> </u>            | <u>H</u>            | <u>H</u>            | H                   | <u> </u>            | 7                   | 7                   | <u>, 2</u>          | <u>H</u>            | <del>i</del>        |                     | H                   | <u> </u>            | H                   | <u> </u>            | <u> </u>            | <u> </u>            | <u>E</u>            | <u> </u>            | <u>#</u>            | <u>H</u>            | <u>.</u>            |                     | S                   | 1                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <b>-</b>            |                     |                     |                     |                     | _                   | ,,,,,               |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     | :                   | •                   |                     | -                   |                     |                     | _                   |                     | •                   |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         | -                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                     |                     |                    |                    | -                   |                     |                     |                     |             |             |             |                  |                  |           | -                |                  | -                |                     |             |           |             |                    |             |           |                    |             |                  |                    | •                |           |
|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|-------------|-------------|-------------|------------------|------------------|-----------|------------------|------------------|------------------|---------------------|-------------|-----------|-------------|--------------------|-------------|-----------|--------------------|-------------|------------------|--------------------|------------------|-----------|
|                     |                     |                    | ·<br>              |                     |                     |                     |                     |             |             |             |                  |                  |           | -                |                  |                  |                     |             | •••       |             |                    |             |           |                    | ·- <u>-</u> |                  |                    |                  |           |
|                     |                     |                    | <u>.</u>           |                     |                     |                     |                     |             |             |             |                  |                  |           |                  |                  | l,<br>_          |                     |             |           |             |                    |             |           | <b>,</b>           |             |                  |                    | T,               | , i       |
| .0772: 2, L0648: 2, | .0806: 2, L0438: 2, | H0520: 2, H0670: 2 | H0660: 2, H0672: 2 | 10651: 2, S0328: 2, | H0539: 2, S0378: 2, | S0136: 2, S3012: 2, | S3014: 2, S0206: 2, | 2, L0746: 2 | 2, S0436: 2 | 2, L0601: 2 | 10423: 2, H0171: | 10265: 1, H0556: | 1, H0686: | H0738: 1, H0657: | H0484: 1, H0661: | H0662: 1, H0589: | S0356: 1, S0376: 1, | 1, T0008: 1 | 1, H0208: | 1, H0640: 1 | L0717: 1, H0351: 1 | 1, H0550: 1 | 1, H0461: | H0409: 1, H0299: 1 | 1, H0333:   | H0486: 1, H0190: | H0635: 1, S0010: 1 | H0318: 1, H0007: | 1, H0596: |
| L0772:              | T0806:              | H0520:             | H0660:             | H0651:              | H0539:              | S0136: 2            | S3014: 3            | L0751:      | L0752:      | T0608:      | H0423:           | H0265:           | H0225:    | H0738:           | H0484:           | H0662:           | S0356:              | S0410:      | H0733:    | S0046:      | L0717:             | S0278:      | H0431:    | H0409:             | H0601: 1,   | H0486:           | H0635:             | H0318:           | H0263: 1  |
|                     |                     |                    |                    |                     |                     | ı                   |                     | •           |             |             |                  |                  | •         |                  |                  |                  |                     |             |           |             |                    |             |           |                    |             |                  |                    |                  |           |
|                     |                     |                    |                    |                     |                     |                     |                     |             |             |             |                  |                  |           |                  |                  |                  |                     |             |           |             |                    |             |           |                    |             | _                |                    |                  |           |
|                     |                     | <del>,</del>       |                    |                     |                     |                     |                     | -           | ·           |             | -                |                  |           |                  |                  |                  |                     |             |           |             |                    |             |           |                    |             |                  | <u> </u>           |                  |           |
|                     |                     |                    | <u> </u>           | _                   |                     |                     | -                   | •           |             |             |                  |                  | _         |                  |                  |                  |                     |             |           |             |                    |             |           |                    |             |                  |                    |                  | _         |
|                     |                     |                    |                    |                     |                     | •                   |                     |             |             |             |                  |                  |           |                  | ····             |                  |                     |             |           |             |                    |             |           |                    | •           |                  |                    |                  |           |
|                     | _                   |                    |                    | -                   |                     |                     |                     | · · · · · · | _           |             |                  |                  | -         |                  |                  |                  |                     | ·           | •         |             |                    |             |           |                    |             | -                |                    |                  |           |
|                     |                     |                    |                    |                     |                     |                     |                     |             |             |             |                  |                  |           |                  |                  |                  |                     |             |           |             |                    |             |           |                    |             |                  |                    |                  |           |

|                  |                    |                  |                    |                  | -                |                  |                  |                  |                  |                    |                    |                    |                  |          |                    |                     |                    |                    |                    |   |                    |                    |                    |                    |                    |                    | -                  |                  |                    |
|------------------|--------------------|------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|--------------------|--------------------|------------------|----------|--------------------|---------------------|--------------------|--------------------|--------------------|---|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------|--------------------|
| 1,               |                    |                  |                    | 1,               | 1,               | 1                |                  |                  | 1,               |                    |                    |                    |                  |          |                    | ·<br>               |                    |                    |                    |   |                    |                    |                    |                    |                    |                    |                    |                  | [,                 |
| H0327: 1, H0544: | .0471: 1, H0051: 1 | H0179: 1, H0687: | S0214: 1, H0252: 1 | H0688: 1, H0039: | 10031: 1, H0032: | H0674: 1, H0124: | H0316: 1, H0591: | H0040: 1, H0063: | 10551: 1, H0059: | .0564: 1, T0041: 1 | H0560: 1, S0440: 1 | S0144: 1, S0142: 1 | .0598: 1, H0529: |          | .0631: 1, L0638: 1 | .0796: 1, L.5566: 1 | .0667: 1, L0643: 1 | .0521: 1, L0767: 1 | .5574: 1, L0375: 1 | • | .0606: 1, L0807: 1 | .0527: 1, L0512: 1 | .0659: 1, L0517: 1 | .0542: 1, L0382: 1 | .0530: 1, L0787: 1 | .0789: 1, L0790: 1 | .0791: 1, L0664: 1 | S0052: 1, H0519: | H0593: 1, S0122: 1 |
|                  | H                  |                  | S                  |                  | <u>H</u>         | 14               | <u>, 1-1-1</u>   |                  | <u> </u>         | <u> </u>           | <u> </u>           | <u> </u>           | Ţ                | <u> </u> |                    | <u> </u>            | 1                  |                    | <u>.</u>           |   | 1                  | <u> </u>           | <u> </u>           | <del></del>        | #                  | <u>. Paril</u>     | <del>- 12</del>    | <u> </u>         | 1                  |
|                  |                    |                  |                    |                  |                  | -                |                  |                  |                  |                    |                    |                    |                  | -,-      |                    |                     |                    |                    |                    |   |                    |                    |                    |                    |                    |                    |                    |                  |                    |
|                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |                    |                    |                    |                  |          |                    | <del></del>         |                    |                    |                    |   |                    |                    |                    |                    |                    |                    |                    |                  |                    |
|                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |                    |                    |                    |                  |          |                    |                     |                    |                    |                    |   |                    |                    |                    |                    | -                  |                    |                    |                  |                    |
|                  |                    |                  |                    |                  |                  |                  |                  |                  |                  |                    |                    |                    | •                |          |                    |                     |                    |                    | •                  |   |                    |                    |                    |                    |                    |                    |                    |                  |                    |

| H0684: 1, S0330: 1,<br>H0518: 1, H0522: 1,<br>H0478: 1, S0027: 1,<br>S0028: 1, L0743: 1,<br>L0744: 1, L0439: 1,<br>L0740: 1, L0749: 1,<br>L0786: 1, L0749: 1,<br>L0757: 1, S0260: 1,<br>H0444: 1, H0595: 1,<br>L0581: 1, L0605: 1,<br>L0581: 1, L0362: 1,<br>S0192: 1, H0422: 1,<br>S0424: 1, H0008: 1 and<br>H0352: 1. | L0605: 28, L0754: 9, S0003: 6, L0803: 6, L0777: 5, L0759: 4, L0770: 3, L0663: 3, H0683: 3, L0439: 3, S0026: 3, H0171: 2, S0418: 2, H0591: 2, H0032: 2, L0768: 2, L0669: 2, L0659: 2, L0659: 2, L0659: 2, L0659: 2, H0547: 2, H0547: 2, H0519: 2, H0670: 2, S0380: 2, H0670: 2, S0380: 2, L06670: 2, L066 |
|---|--|
|   | Lys-45 to Asp-54, L0605: 28, L0754: Thr-56 to Leu-63, S0003: 6, L0803: 6, Gln-227 to Thr-241, L0777: 5, L0759: 4, Glu-287 to Val-292, L0770: 3, L0663: 3, Glu-431 to Gly-337, H0683: 3, L0599: 3, Glu-436 to Cys-441, S0026: 3, H0171: 2, Glu-454 to Glu-461. S0418: 2, H0587: 2, H0413: 2, L0772: 2, L0768: 2, L0669: 2, L0768: 2, L0669: 2, L0659: 2, L0666: 2, H0547: 2, H0519: 2, H0519: 2, H0547: 2, H0519: 2, H0570: 2, S0380: 2, S0 |
|   | 2925   |
|   | 2 - 1429   |
|   | 750  |
|   | 1049466  |
|   | HMUBT31  |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|-------------------|--|
|                     |                     |                     | <del> </del>        | •                   |                     | <del></del>         |                   |                     |                     |                     | <u>-</u>            |                     |                     |                   |                     |                     |                     | -                   |                     |                     |                     |                     |                   | -                   |                     |                     |                     |                   |  |
| J0747: 2, L0731: 2, | .0587: 2, L0591: 2, | .0362: 2, S0192: 2, | H0624: 1, T0049: 1, | H0663: 1, H0402: 1, | H0638: 1, S0376: 1, | S0444: 1, S0360: 1, | 208: 1, S6026: 1, | H0392: 1, H0635: 1, | .0021: 1, H0575: 1, | H0581: 1, H0052: 1, | H0596: 1, H0597: 1, | .0738: 1, H0544: 1, | H0024: 1, S0051: 1, | 428: 1, H0622: 1, | H0031: 1, H0553: 1, | H0644: 1, H0169: 1, | H0090: 1, H0038: 1, | H0040: 1, H0100: 1, | H0494: 1, H0560: 1, | H0625: 1, H0646: 1, | S0344: 1, H0538: 1, | S0422: 1, H0529: 1, | 646: 1, L0662: 1, | .0794: 1, L0387: 1, | .0766: 1, L0804: 1, | .0776: 1, L0527: 1, | .0647: 1, L0665: 1, | 438: 1, L0352: 1, | H0435: 1, H0658: 1,                            |
| OT)                 |                     | <u>.</u>            | OH .                | OH)                 | OH.                 | <u>S</u> 0          | OH OH             | OH HO               | <u>1</u>            | OH HO               | HO                  | <u>1</u>            | OH OH               | OH HO             | OH.                 | HO                  | HO                  | OH)                 | OH                  | OH                  | SOS                 | SO                  | 2                 | <u>3</u>            | 2                   | 3                   | 3                   | <u>3</u>          | HO   |
|                     |                     |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     | ,                 | <u>.                                      </u> |
|                     |                     |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     | ,                   |                     |                     |                     |                   |                     |                     |                     |                     |                   |  |
|                     | ·                   |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     | ,                   |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |                   |  |

|  | 121050,<br>131400   | 138040,   | 153455, | 159000, | 179095, | 181460, | 192974, | 192974, | 600807, | 601596, | 601692, | 601692, | 601692, | 601692, | 602089, | 602121, | 602460 | 157640,               | 174900,               | 180250,              | 186770,             | 236730,             |
|--|---------------------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|-----------------------|-----------------------|----------------------|---------------------|---------------------|
|  | 5q31                |           | ,       |         |         | ٠       |         |         |         |         |         |         |         |         |         |         |        | 10q24                 |                       |                      |                     |                     |
| H0660: 1, H0672: 1,<br>S0330: 1, S0378: 1,<br>H0518: 1, H0521: 1,<br>H0522: 1, L0779: 1,<br>S0031: 1, H0444: 1,<br>L0589: 1, L0592: 1 and<br>L0608: 1. | S0134: 1, S0222: 1, | L0366: 1. |         |         |         |         | •       |         |         |         |         | -       |         |         | -       | -       |        | L0659: 19, S0476: 18, | H0271: 18, S0152: 15, | H0521: 12, L0666: 7, | S0132: 6, H0494: 5, | L0754: 5, L0601: 5, |
|  | Asp-74 to His-85.   | •         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |        | Glu-29 to Cys-39,     | Val-46 to Ser-52,     | Asn-58 to Gly-65,    | Cys-68 to His-82,   | Tyr-84 to Gly-94,   |
| -  | 2926                |           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |        | 2927                  |                       |                      | ,                   |                     |
|  | 456 - 202           |           |         | -       |         |         |         | •       | •       |         |         |         |         |         |         |         |        | 195 - 1205            |                       |                      |                     |                     |
|  | 751                 |           |         |         |         |         |         | ,       |         |         |         |         |         |         |         |         |        | 752                   |                       |                      | •                   |                     |
|  | 1049644             |           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |        | 1050102               |                       |                      |                     |                     |
|  | НЕРДО90             |           |         |         |         | •       |         |         |         |         |         |         |         |         |         |         |        | HVVCB79               |                       |                      |                     |                     |

| 271245,                                 | 278000,             | 278000,                                 | 600095,             | 600512,             | 601107,             | 601130,             | 602082              |                     |                     |                     |                     |                     | <u>.</u>            | -                   |                     |                     |                     |                     |  |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |
|---|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| S0360: 4, L0771: 4,                     | L0653: 4, L0751: 4, | H0295: 3, H0486: 3,                     | H0635: 3, H0416: 3, | H0615: 3, L0662: 3, | S0428: 3, L0748: 3, | L0747: 3, L0731: 3, | H0661: 2, S0376: 2, | H0437: 2, H0587: 2, | H0485: 2, T0039: 2, | H0318: 2, H0545: 2, | H0620: 2, H0266: 2, | H0090: 2, H0623: 2, | L0763: 2, L0646: 2, | L0642: 2, L0774: 2, | L0775: 2, L0378: 2, | L0806: 2, L0664: 2, | S0374: 2, H0519: 2, | S0406: 2, L0439: 2, | L0779: 2, L0755: 2,                            | L0604: 2, L0698: 2, | H0149: 1, H0686: 1, | H0713: 1, S0212: 1, | H0255: 1, S0408: 1, | H0637: 1, S0046: 1, | H0411: 1, S0278: 1, | H0599: 1, H0251: 1, | H0457: 1, H0024: 1, | H0014: 1, H0328: 1, | H0553: 1, H0644: 1, |
| Leu-122 to Trp-138, S0360: 4, L0771: 4, | Ala-158 to Leu-170, | Gly-175 to Arg-182, H0295: 3, H0486: 3, | Tyr-203 to Ser-210, |                     | Arg-288 to Gln-296. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| H0598: 1, H0634: 1, | H0268: 1, H0056: 1, | L0564: 1, S0344: 1, | S0002: 1, S0426: 1, | L0770: 1, L0372: 1, | L0641: 1, L0645: 1, | L0648: 1, L0767: 1, | L0649: 1, L0389: 1, | L0388: 1, L0803: 1, | L0654: 1, L0793: 1, | L0665: 1, S0052: 1, | S0053: 1, S0216: 1, | H0658: 1, H0672: 1, | H0518: 1, H0522: 1, | H0696: 1, L0750: 1, | L0752: 1, H0445: 1, | S0436: 1, L0596: 1, | S0458: 1 and H0506: 1. | AR055: 2, AR033: 1, |                            | AR096: 1, AR039: 0,        | AR061: 0, AR052: 0,        | AR053: 0 | H0521: 36, L0754: 20, | L0748: 13, L0740: 12, | L0439: 9, S0440: 8, | H0522: 8, L0777: 8, | H0580: 7, H0641: 7, | L0659: 7, S0126: 7, | S0436: 7, H0638: 6, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u> </u>               | Ala-32 to Arg-48,   | Cys-138 to Ser-147, AR089: | Lys-161 to Glu-166, AR096: | Pro-179 to Asn-189, AR061: |          |                       |                       |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2928                |                            |                            |                            |          |                       |                       |                     |                     |                     |                     | . !                 |
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| 6,                  | Ś                   | ۰.                  | ر.                  | ₹                   | ₩                   | ↔,                  | 4,                  | ₹.                  | ຕົ   | ~ <b>^</b>          | χ,                  | <u>ښ</u>            | ω,                  | 33                  | χ,                  | ~,                  | ຕ໌                  | a,                  | ~,                  | ς,                  | ج,                  | ດໂ                  | Ų                   | ۶,                  | ų                   | ۷,                  | ۷,                  | ر.<br>م             | ر.<br>د   |
| H0616: 6, L0757: 6, | .0758: 6, H0486: 5, | S0438: 5, S0002: 5, | .0775: 5, L0809: 5, | S0408: 4, H0574: 4, | H0553: 4, S0344: 4, | .0805: 4, L0655: 4, | 50664: 4, H0518: 4, | .0744: 4, L0747: 4, | 524: | 30376: 3, S0360: 3, | S0410: 3, H0004: 3, | H0581: 3, S0003: 3, | S0214: 3, H0428: 3, | H0622: 3, H0038: 3, | 50142: 3, H0529: 3, | .0646: 3, L0771: 3, | .0521: 3, L0662: 3, | H0689: 3, H0658: 3, | S0330: 3, L0779: 3, | .0731: 3, L0759: 3, | S0342: 2, H0717: 2, | S0356: 2, S0444: 2, | H0599: 2, H0318: 2, | H0457: 2, T0003: 2, | H0024: 2, H0057: 2, | H0179: 2, H0674: 2, | H0591: 2, H0561: 2, | .0770: 2, L0769: 2, | L0641: 2, |
| , 10                | , H0                | , 500               | ž                   | , H0                | , SO                | , 100               | , HO                | 10,                 | , HO | , S03               | , HO                | , SO(               | , H0                | , HO                | , H0                | 150                 | Ĭ,                  | , HO                | Ľ                   | ,107                | , HO                | , S04               | , HO                | , T0                | , HO                | , H0                | , HO                | , EO                | Ĭ,        |
| 16: 6               | 58: 6               | 38: 5               | 75: 5               | 38:4                | 53: 4               | 05:4                | 4:4                 | 4:4                 | 49:4 | 76:3                | 10:3                | 81:3                | 14:3                | 22:3                | 42:3                | 46:3                | 21:3                | 89: 3               | 30:3                | 31:3                | 42:2                | 56: 2               | 99:2                | 57:2                | 24:2                | 79: 2               | 91:2                | 70:2                | .0627: 2, |
| 90H                 | 107                 | <b>S04</b>          | <u>1204</u>         | <b>S04</b> (        | H05                 | <u>8</u> 07         | <u>1</u> 08         | <u> 2</u>           | Š    | <b>S03</b>          | <b>S04</b>          | H05                 | S02                 | 90H                 | S01 <sup>2</sup>    | 106                 | 105                 | 90H                 | 803                 | 101                 | <b>203</b>          | 803;                | H05                 | H04                 | <u>H</u> 00         | H01                 | H05                 | <u>12</u>           | 106       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |           |
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| .0649; 2, L0803; 2, | L0653: 2, L0776: 2, | 1: 2, L0666: 2, | 4: 2, L0438: 2, | H0547: 2, H0593: 2, | H0659: 2, H0670: 2, | S0152: 2, H0696: 2, | H0436: 2, L0751: 2, | 0: 2, L0752: 2, | .0591: 2, L0581: 2, | 3: 2, L0362: 2, | S0242: 2, H0170: 1, | H0556: 1, H0686: 1, | H0713: 1, H0294: 1, | 3: 1, L0415: 1, | 8: 1, L0785: 1, | H0663: 1, S0418: 1, | S0442: 1, S0358: 1, | H0637: 1, H0735: 1, | 3: 1, H0339: 1, | S0132: 1, H0393: 1, | H0411: 1, S0278: 1, | S0222: 1, H0601: 1, | H0586: 1, H0587: 1, | H0333: 1, H0331: 1, | .0586: 1, H0013: 1, | H0250: 1, H0069: 1, | H0505: 1, S0474: 1, | H0052: 1, H0596: 1, | H0546: 1, H0545: 1, |
| L0649               | 3907                | L079            | 7LEOS           | H054                | H065                | S0152               | H043                | 1075(           | [650]               | T026            | S0242               | H055                | H071:               | H058            | 10807           | 990H                | S0442               | H063,               | H073            | S0132               | H041                | 2022                | H058                | H033                | F0586               | H025                | H050                | H005                | H054                |
|                     |                     |                 |                 | - :                 |                     |                     |                     |                 |                     |                 |                     |                     |                     |                 |                 |                     |                     |                     |                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| H0046: 1, H0123: 1, | H0014: 1, H0373: 1, | S0051: 1, H0510: 1, | H0266: 1, S0318: 1, | S0316: 1, H0328: 1, | H0688: 1, H0031: 1, | H0032: 1, H0673: 1, | H0169: 1, H0598: 1, | H0090: 1, T0069: 1, | H0100: 1, T0041: 1, | T0042: 1, S0370: 1, | H0633: 1, H0646: 1, | S0426: 1, L0369: 1, | L0763: 1, L0638: 1, | L0372: 1, L0644: 1, | •             | L0381: 1, L0774: 1, | L0376: 1, L0806: 1, | •              | _:          | L0542: 1, L0789: 1, | L0663: 1, L0665: 1, | S0052: 1, L0352: 1, | H0520: 1, H0519: 1, | H0690: 1, H0660: 1, | S0380: 1, S0350: 1, | S0146: 1, S0406: 1, | S3014: 1, S0027: 1, | L0756: 1, S0031: 1, | H0445: 1, S0434: 1, |
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| H0667: 1, S0026: 1,<br>H0667: 1, S0192: 1,<br>S0194: 1, S0196: 1,<br>H0542: 1, H0423: 1,<br>H0422: 1, S0458: 1,<br>H0352: 1 and H0712: 1. | H0556: 10, L0758: 9,<br>L0777: 7, H0422: 7,<br>H0179: 5, H0634: 5,<br>L0747: 5, L0766: 4,<br>L0664: 4, L0751: 4,<br>H0542: 4, H0423: 4,<br>H0657: 3, S0476: 3,<br>H0657: 3, H0641: 3,<br>L0761: 3, H0555: 3,<br>H0436: 3, L057: 3,<br>H0486: 2, H0553: 2,<br>H0486: 2, L0667: 2,<br>L0772: 2, L0667: 2,<br>L0772: 2, L0667: 2,<br>L0772: 2, L0667: 2,<br>L0772: 2, L0667: 2,<br>L0772: 2, L0667: 2,<br>L0772: 2, L0667: 2,<br>L0772: 2, L0667: 2,<br>L0772: 2, L0667: 2,<br>H0673: 2, H0658: 2,<br>H0673: 2, H0445: 2,<br>L0750: 2, H0445: 2,<br>H0653: 2, H0220: 1,<br>H06713: 1, S0218: 1,   |
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| <u>                                      </u>   | Ala-1 to Ser-19, Gln-50 to Ala-69, Lys-113 to Lys-120, Thr-132 to Trp-147, Glu-162 to Gly-172, Leu-185 to Ser-219, Thr-226 to Tyr-234, Pro-288 to Pro-304, Glu-312 to Lys-324, Glu-312 to Lys-324, Hyper-334 to Gly-355. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyper-344 to Gly-356. Hyp |
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| H0663: 1, H0402: 1, | S0418: 1, S0442: 1, | S0376: 1, S0444: 1, | S0046: 1, H0392: 1, | N0009: 1, H0042: 1, | : 1, S0474: 1, | H0581: 1, H0085: 1, |        |             | : 1, H0093: 1, | H0083: 1, H0060: 1, | : 1, H0687: 1, | H0622: 1, L0483: 1, | S0368: 1, H0032: 1, | H0040: 1, H0623: 1, | : 1, H0633: 1, | H0646: 1, S0142: 1, |          | 1, L0764: 1, | 1, L0364: 1, | : 1, L0806: 1, | : 1, L0776: 1, | : 1, L0657: 1, | : 1, L0382: 1, | : 1, L0791: 1, | : 1, L0665: 1, | : 1, H0593: 1, | H0435: 1, H0659: 1, | : 1, S3014: 1, | .0744: 1, L0748: 1, |
| E990H               | S0418:              | S0376:              | S0046:              | 6000N               | H0575: 1       | H0581               | H0546: | H0457:      | H0014: 1       | H0083               | H0247:         | H0622               | S0368:              | H0040               | H0561: 1       | H0646               | S0002: 1 | L0646: 1, ]  | L0768: 1     | [L0775:        | L0653:         | T0901: 1       | F0658: 1       | [T0789:        | T0666: 1       | H0701:         | H0435               | H0522:         | L0744               |
|                     |                     |                     |                     | _                   |                | ·                   |        | <del></del> | :,             |                     | <u> </u>       |                     |                     |                     |                | <del></del>         |          |              |              |                |                |                |                |                |                |                |                     |                |                     |
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|                                  | 100690,             | 120180,             | 120180,             | 120180,             | 120180,             | 120190,             | 142989,             | 156232,             | 178600,             | 266100,             | 600258,             | 600321              |                     |   |   |   |   |   |                     |  |                     | _                   |                     |                     |                     |                     |                     |                     |
|                                  | 2q31                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |   |   |   |   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |
| L0731: 1, S0196: 1 and H0506: 1. | L0758: 8, L0439: 7, | S0003: 6, L0602: 6, | L0665: 5, S0330: 5, | H0521: 5, L0755: 5, |                     |                     | L0775: 4, L0666: 4, | L0748: 4, H0423: 4, |                     |                     | S0022: 3, L0659: 3, |                     | L0740: 3, L0751: 3, | L0596: 3, H0411: 2,                     | Asp-495 to Lys-503, H0250: 2, S0280: 2, | Asn-508 to Leu-514, H0575: 2, H0051: 2, | Lys-528 to Ser-544, H0083: 2, H0031: 2, | Asp-565 to Tyr-576, UNKWN: 2, L0763: 2, | L0776: 2, L0664: 2, | S0148: 2, L0438: 2,                    | H0660: 2, S0328: 2, | S0380: 2, L0747: 2, | L0777: 2, L0590: 2, | L0592: 2, L0581: 2, | L0594: 2, L0362: 2, | S0194: 2, H0624: 1, | T0002: 1, H0140: 1, | H0685: 1, S0040: 1, |
|                                  | Ser-35 to Glu-40,   | Leu-43 to Lys-63,   | Gln-88 to Tyr-97,   | Gln-156 to Glu-161, | Val-218 to Phe-223, | Ser-229 to Cys-237, | Phe-323 to Ala-332, | Phe-334 to Ser-339, | Glu-357 to Gly-362, | Ser-382 to Pro-391, | Ser-403 to His-411, | Asp-414 to Leu-425, | Pro-429 to Arg-444, | Ser-481 to Asn-486, L0596: 3, H0411: 2, | Asp-495 to Lys-503,                     | Asn-508 to Leu-514,                     | Lys-528 to Ser-544,                     | Asp-565 to Tyr-576,                     | Leu-578 to Gly-584, | Lys-591 to Asn-600 S0148: 2, L0438: 2, |                     |                     |                     |                     |                     |                     |                     |                     |
|                                  | 2930                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |   |   | ٠                                       |   |                     |  |                     |                     |                     |                     |                     |                     | •                   |                     |
|                                  | 616 - 2415          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                                       |   |   |   |   |                     |  |                     |                     |                     |                     |                     |                     | ,                   |                     |
|                                  | 755                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |   |   |   |   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |
|                                  | 1050282             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |   |   |   |   |   |                     |  |                     |                     |                     |                     | ,                   |                     |                     | ,                   |
|                                  | HNOJA87             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |   |   |   |   |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |

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| : 1, H0583: 1, | S0116: 1, S0001: 1, | H0483: 1, H0664: 1, | S0420: 1, S0354: 1, | : 1, S0360: 1, | l: 1, H0600: 1, | H0592: 1, H0586: 1, | 7: 1, T0114: 1, | H0013: 1, H0427: 1, | 3: 1, H0004: 1, | S0010: 1, H0581: 1, | H0421: 1, H0596: 1, | 5: 1, H0050: 1, | .0471: 1, H0024: 1, | H0014: 1, H0373: 1, | H0375: 1, H0266: 1, | H0428: 1, H0070: 1, | 9: 1, H0644: 1, | H0032: 1, H0598: 1, | l: 1, H0040: 1, | H0616: 1, H0551: 1, | F0067: 1, H0647: 1, | L0770: 1, L0769: 1, | 8: 1, L0646: 1, | .0764: 1, L0648: 1, | 1: 1, L0549: 1, | .0389: 1, L0806: 1, | .0652: 1, L0655: 1, | .0607: 1, L0526: 1, | 0783: 1, S0053: 1, |
| S0134: 1       | S0116               | H048                | S0420               | 80358          | H043            | H0597               | H058            | H001:               | H0098: 1        | )1008               | H042                | H054            | 1.047               | H001                | H037                | H042                | H003            | H003;               | H059            | H0610               | T0067               | )//07J              | 1063            | 79/07               | L052]           | T0386               | T065                | 10907               | L078               |
|                |                     |                     |                     |                |                 |                     |                 |                     |                 |                     |                     |                 |                     | <u> </u>            |                     |                     |                 |                     |                 |                     |                     |                     |                 |                     |                 |                     | ·                   |                     |                    |
|                |                     |                     |                     |                |                 |                     |                 |                     |                 | *****               |                     |                 |                     | ·<br>               |                     |                     |                 |                     |                 |                     |                     |                     |                 |                     |                 |                     |                     |                     |                    |
|                |                     |                     |                     | · ·            |                 |                     |                 |                     | •               |                     |                     |                 |                     |                     |                     |                     |                 |                     |                 |                     |                     | •                   |                 |                     |                 |                     |                     |                     |                    |
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|  | 145260,<br>600759,<br>601975   |
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|  | 1q32.2   |
| T0068: 1, H0684: 1, H0670: 1, S0378: 1, H0518: 1, H0696: 1, S0406: 1, L0754: 1, L0759: 1, L0753: 1, L0759: 1, L0599: 1, L0608: 1, L0366: 1, S0026: 1, H0667: 1, S0242: 1, H0667: 1, S0242: 1, H0667: 1 and S0424: 1. | S0444: 13, L0751: 12,<br>S0358: 11, L0659: 11,<br>S0436: 10, S0442: 8,<br>S0410: 8, S0406: 8,<br>S0434: 8, L0662: 6,<br>H0435: 6, S0440: 5,<br>L0657: 5, S0354: 4,<br>T0023: 4, L0764: 4,<br>L0771: 4, L0666: 4,<br>H0690: 4, L0743: 4,<br>H0647: 3, H0615: 3,<br>H0647: 3, H0615: 3,<br>H0647: 3, L0372: 3,<br>L0744: 3, L0748: 3,<br>H0663: 2, S0376: 2,<br>S0408: 2, H0036: 2,<br>H0622: 2, L0483: 2,   |
|  | Ser-55 to Thr-60, S0444: 13, L0751: Glu-97 to Ser-103, S0358: 11, L0659: 1 Thr-164 to Glu-170, S0436: 10, S0442: 8 Gly-192 to Gly-197, S0410: 8, S0406: 8, Leu-204 to Ser-218, S0434: 8, L0662: 6, Ala-238 to Ser-250, H0435: 6, S0440: 5, Asp-265 to Tyr-292, L0657: 5, S0354: 4, Gly-298 to Gly-307, T0023: 4, L0764: 4, Gly-351 to Met-359, L0771: 4, L0666: 4, Phe-389 to Glu-400. H0690: 4, L0743: 4, H0647: 3, H0593: 3, H0647: 3, L0744: 3, L0744: 3, L0748: 3, H0663: 2, S0376: 2, S0408: 2, H0036: 2, L0483: 2, L |
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|  | 56 - 1273  |
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| H0553: 2, L0646: 2, | L0649: 2, L0664: 2, | S0374: 2, H0520: 2, | H0689: 2, H0682: 2, | H0660: 2, S0330: 2, | H0555: 2, L0750: 2, | L0596: 2, S0430: 1, | H0483: 1, H0671: 1, | H0661: 1, S0360: 1, | H0549: 1, H0431: 1, | H0574: 1, H0632: 1, | H0270: 1, T0040: 1, | T0060: 1, H0590: 1, | H0085: 1, H0263: 1, | L0040: 1, H0597: 1, | H0231: 1, H0316: 1, | H0040: 1, H0059: 1, | H0117: 1, S0448: 1, | S0464: 1, S0306: 1, | H0509: 1, H0130: 1, | L0763: 1, L0627: 1, | L0374: 1, L0765: 1, | L0648: 1, L0803: 1, | L0774: 1, L0775: 1, | L0806: 1, L0652: 1, | L0653: 1, L0776: 1, | L0540: 1, L0518: 1, | L0782: 1, L0382: 1, | L0809: 1, L0790: 1, | H0547: 1, H0658: 1, |
|                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| F   |  | <del></del>   |
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|   | 107777,<br>123940,<br>139350,<br>139350,<br>148040,<br>148041,<br>148070,<br>231550,<br>600194,<br>600231,<br>600231,<br>600236,<br>601284,<br>601284,<br>601769,<br>601769,<br>601769,<br>601769,   |   |
|   | 12913  |   |
| H0670: 1, H0672: 1,<br>S0328: 1, S0380: 1,<br>S0404: 1, H0478: 1,<br>S0432: 1, L0752: 1,<br>L0591: 1, L0608: 1 and<br>H0506: 1. | S0280: 3, H0581: 3,<br>H0622: 3, H0690: 3,<br>L0751: 3, H0506: 3,<br>S0356: 2, H0670: 2,<br>H0254: 1, S0046: 1,<br>H0411: 1, H0438: 1,<br>H0600: 1, H0632: 1,<br>H0635: 1, H0599: 1,<br>H0009: 1, H0650: 1,<br>H0039: 1, S0364: 1,<br>H0509: 1, L0527: 1,<br>S0052: 1, H0693: 1,<br>H0689: 1, H0660: 1,<br>S0378: 1, H0555: 1,<br>S0378: 1, H0555: 1,<br>S0378: 1, H0555: 1,   | L0740: 12, L0653: 6,<br>L0665: 6, H0150: 5,<br>L0439: 5, H0688: 4,<br>L0771: 4, L0659: 4, |
|   | Pro-7 to Ala-17, S0280: 3, H0581:: Pro-28 to Gln-38, H0622: 3, H0690: 3 Asp-58 to Ser-78, L0751: 3, H0506: 3 Phe-113 to Asp-120, S0356: 2, H0670: 2, Tyr-171 to Glu-177, H0254: 1, S0046: 1, Gln-237 to Gln-246. H0411: 1, H0438: 1 H0600: 1, H0632: 1, H0632: 1, H0632: 1, H0632: 1, H0632: 1, H0632: 1, H0633: 1, H0639: 1, S0052: 1, H0693: 1, L0438: 1, H0593: 1, R0689: 1, H0660: 1 S0378: 1, H0555: 1, S0392: 1, S0390: 1, S0392: 1, S0390: 1, S0392: 1, S0393: 1, | Pro-19 to Ala-25,<br>Pro-30 to Gly-50,<br>Arg-66 to Gly-78.                               |
|   | 2932   | 2933  |
|   | 2738<br>2738   | 83 - 1300   |
|   | 757  | 758   |
|   | 1050536  | 1050553   |
|   | HHFGN14  | HTAIN76   |

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| .0809:-4, L0751:-4, | .0747: 4, L0749: 4, | .0779: 4, L0601: 4, | S0420: 3, H0486: 3, | H0620: 3, H0494: 3, | .0662: 3, L0757: 3, | S0040: 2, H0662: 2, | 30007: 2, H0549: 2, | S0222: 2, H0009: 2, | H0123: 2, H0024: 2, | H0606: 2, H0634: 2, | H0413: 2, H0100: 2, | .0769: 2, L0794: 2, | .0649: 2, L0803: 2,                           | .0655: 2, L0382: 2, | .0666: 2, L0731: 2, | .0758: 2, L0759: 2, | .0605: 2, H0170: 1, | F0049: 1, H0663: 1, | J0005: 1, S0045: 1, | S0046: 1, H0619: 1, | H0550: 1, S0220: 1, | .0468: 1, H0587: 1, | H0643: 1, H0574: 1, | H0632: 1, H0635: 1, | F0048: 1, H0505: 1, | H0597: 1, H0546: 1, | H0545: 1, H0046: 1, | N0007: 1, H0188: 1, | H0622: 1, T0023: 1, |
|                     |                     | <u> </u>            |                     |                     |                     | <u> </u>            | <u> </u>            | <u> </u>            | <u> </u>            | <b>P-1</b>          |                     | <u> </u>            | <u>,                                     </u> |                     | <u>- Fr-4</u>       |                     |                     |                     |                     | <u>.</u>            |                     | .=.                 | <u> </u>            |                     |                     |                     | <u> </u>            |                     | 1                   |
| _                   | ·<br>——             |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     | <u></u>             |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     | .,                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     | •                   |                     |                     |                     |                     |                     |                     | _                   |                     |                     | _                   |                     |   | _                   |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     | <del>-</del>        |                     |                     |                     |

| J  |   | 300031,<br>300044,<br>300048,<br>300049,<br>300049,   | 300100,<br>300100,<br>300104,<br>300126,<br>301201,  |
|--|---|---|--|
|  |   | 80  |  |
|  |   | 9, Xq28<br>2,   |  |
|  |   | 4   |  |
| L0142: 1<br>H0551: 1<br>H0509: 1<br>L0770: 1<br>L0375: 1<br>L0375: 1<br>L0657: 1<br>L0664: 1<br>H0519: 1<br>H0672: 1<br>H0672: 1   | 20037: 1, L0/45: 1,<br>L0748: 1, L0756: 1,<br>L0780: 1, L0752: 1,<br>L0591: 1, H0667: 1,<br>S0242: 1 and S0276: | AR089: 11, AR104: AR060: 6, AR096: AR061: 3, AR055: L0803: 7, H0024: 5, L0805: 5, L0750: 5,   | Asp-1.21 to Crry-1.32, S0026; 3, H0206; 3, Glu-148 to Leu-155, S0440; 3, L0769; 3, Glu-161 to Glu-172. S0126; 3, H0670; 3, H0411; 2, S0152; 3, H0411; 2, S0222; 2, S0010; 2, H0046; 2, |
|  |   | 6, 11, 3, 2, 17, E  | 2, 2, 3, 3, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5,   |
| H0213: 1, L0142:<br>H0039: 1, H0551:<br>L0763: 1, L0770: 1,<br>L0775: 1, L0768: 1,<br>L0775: 1, L0776: 1,<br>L0775: 1, L0375: 1,<br>L0789: 1, L0677: 1,<br>L0663: 1, L0664: 1,<br>H0690: 1, H0435:<br>H0658: 1, H0672:<br>S0378: 1, H0672: | 20037: 1, 1<br>LO748: 1, 1<br>LO780: 1, 1<br>LO591: 1, 1<br>SO242: 1 a  | Pro-1 to Thr-10, AR089: 11, AR10<br>Ser-25 to Ile-46, AR060: 6, AR09<br>Glu-76 to Ile-82, AR061: 3, AR05<br>Ile-89 to Gly-95, L0803: 7, H0024<br>Lys-109 to Glu-118, L0805: 5, L0750: | S0020: 3, H0200: 3<br>S0440: 3, L0769: 3<br>S0126: 3, H0670: 3<br>S0330: 3, S0152: 3<br>H0411: 2, S0222: 3<br>S0010: 2, H0046: 3   |
| <br>   | <u> </u>  | 18,   | 155,8<br>155,8<br>172,8<br>172,8<br>172,8  |
| ·  | •   | Pro-1 to Thr-10,<br>Ser-25 to Ile-46,<br>Glu-76 to Ile-82,<br>Ile-89 to Gly-95,<br>Lys-109 to Glu-1   | - 15 - 15 - 15 - 15 - 15 - 15 - 15 - 15  |
|  |   | 1 to T<br>25 to I<br>76 to 7<br>9 to G<br>109 to  | 12/ K  |
|  |   | Pro-Ser-Clu-Glu-Bile-8  | Asp-<br>Glu-<br>Glu-   |
|  |   | 2934  | ·  |
|  |   | 3 - 557   |  |
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| ·  |   | 759   |  |
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| 301590,             | 302060,             | 302060,             | 302060,            | 302060,            | 302960,             | 303700,            | 303800,             | 303900,             | 304800,             | 305900,             | 305900,             | 305900,             | 306700,             | 306995,             | 308310,             | 308840,             | 308840,             | 308840,             | 309200,             | 309548,             | 309620,             | 309900,             | 310300,             | 310400,             | 310460,             | 310460,             | 311300,             | 311510,             | 314300,             |
|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| H0123: 2, L0471: 2, | H0428: 2, H0616: 2, | H0087: 2, L0763: 2, | 0764: 2, L0766: 2, | 0375: 2, L0666: 2, | 10659: 2, L0740: 2, | 0758: 2, L0759: 2, | 10445: 2, L0599: 2, | H0170: 1, H0686: 1, | H0344: 1, L0002: 1, | H0657: 1, H0306: 1, | S0356: 1, S0358: 1, | S0376: 1, T0008: 1, | S0132: 1, H0455: 1, | .0021: 1, L0022: 1, | H0263: 1, H0572: 1, | H0050: 1, H0620: 1, | H0051: 1, H0083: 1, | H0375: 1, S6028: 1, | H0687: 1, S0022: 1, | H0615: 1, H0688: 1, | H0031: 1, H0708: 1, | H0068: 1, H0038: 1, | H0264: 1, H0272: 1, | 70042: 1, H0561: 1, | S0144: 1, L0598: 1, | H0529: 1, L0631: 1, | .0770: 1, L0637: 1, | .0800: 1, L0794: 1, | .0806: 1, L0382: 1, |
| H                   | H                   | <u>H</u>            | <u> </u>           | 97                 | <u>H</u>            | 21                 | H                   | <u>H</u>            | H                   | H                   | 0S                  | 0S                  | 0S                  | <u>3</u>            | H                   | H                   | <u>田</u>            | H                   | <u>H</u>            | H                   | H                   | <u>H</u>            | H                   | 77                  | <u>S</u>            | )H                  | <u> </u>            | <u>3</u>            | מן                  |
|                     |                     |                     | • .                |                    | •                   | •                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |
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| 314400  |  |   |  |  |                  |   |                     |   |
|---|--|---|--|--|------------------|---|---------------------|---|
| L0809: 1, L0787: 1,<br>L0665: 1, H0144: 1,<br>S0374: 1, H0666: 1,<br>S0380: 1, H0696: 1,<br>S3012: 1, S0032: 1,<br>L0747: 1, L0749: 1,<br>L0777: 1, L0752: 1,<br>L0753: 1, L0757: 1,<br>S0434: 1, S0011: 1, | AR089: 2, AR096: 1,<br>AR104: 1, AR060: 0,<br>AR061: 0, AR055: 0 | 50414: 0, L0/54: 0,<br>0803: 4, H0032: 3,<br>0774: 3, L0665: 3, | .0752: 3, S0418: 2,<br>.0005: 2, H0580: 2,<br>H0431: 2, H0553: 2 | 10673: 2, 20422: 2,<br>10598: 2, L0666: 2, | 2, 2,            | S0001: 1, L0717: 1,<br>H0415: 1, H0013: 1,<br>H0635: 1 S0280: 1 | H0581: 1, S0051: 1, | H0428: 1, S0214: 1,<br>H0428: 1, H0598: 1,<br>H0616: 1, S0438: 1, |
| HISSOHHISS  | Arg-10 to Lys-24, A Phe-50 to Arg-57. A                          | <u> </u>  | <u> </u>   |  | <u>, j , j (</u> | <u>у ш ш</u>  |                     |   |
|   | 2935   |   |  |  |                  |   |                     |   |
|   | 1 - 597  |   |  |  |                  |   |                     |   |
|   | 092  |   |  |  |                  | ·   | -                   |   |
|   | 1050767  |   |  |  |                  |   |                     |   |
|   | HMEKJ82  |   |  |  |                  |   |                     |   |

|  | r  |   |   |
|--|--|---|---|
|  | 229600,<br>264300,<br>600542,<br>602014,<br>602088   |   |   |
|  | 9q11-q22   |   |   |
| S0440: 1, H0641: 1,<br>H0633: 1, H0646: 1,<br>UNKWN: 1, L0646: 1,<br>L0659: 1, L0766: 1,<br>L0809: 1, L0790: 1,<br>L0532: 1, H0658: 1,<br>H0521: 1, S0406: 1,<br>L0751: 1, L0779: 1,<br>L0751: 1, L0779: 1,<br>L0751: 1, H0422: 1,<br>S0042: 1 and H0506: 1. | H0415: 12, H0414: 2,<br>H0355: 1 and H0517: 1.   | H0657: 2, H0686: 1,<br>H0341: 1, L0493: 1,<br>H0144: 1, H0689: 1,<br>L0757: 1 and L0596: 1. | S0474: 13, L0758: 13,<br>L0439: 11, L0754: 11,<br>L0752: 10, H0581: 9,<br>L0766: 9, L0740: 9,<br>L0769: 8, H0423: 8,<br>H0547: 7, L0750: 7, |
|  | Ile-13 to Gly-19,<br>Thr-21 to Gln-28,<br>Lys-38 to Ser-45,<br>Glu-62 to Tyr-68,<br>Val-72 to Gly-77,<br>Pro-87 to Ser-93,<br>Thr-117 to Gln-126,<br>Gln-133 to Leu-139. | Asn-26 to Gly-31,<br>Cys-44 to Asp-50,<br>Gln-85 to Glu-91.                                 | Ala-1 to Gly-7,<br>Ser-20 to Gly-36,<br>Glu-107 to Thr-112,<br>Glu-114 to Pro-119.  |
|  | 2936   | 2937  | 2938  |
|  | 47 - 604   | 153 - 425   | 2 - 598   |
|  | 761  | 762   | 763   |
|  | 1050969  | 1051095   | 1051115   |
|  | HOFNX17  | HAOSY21   | HMWDB39   |

|                     |                     |                     |                     |                     |                     |                    |                    | ,                   |                     |                     |                  |                    |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     | -           |                 |                |                |                  | :                   |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------|-----------------|----------------|----------------|------------------|---------------------|---------------------|
| -                   |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                  |                    |                    |                    |                     | -                   |                     |                     |                     |                     |                     |                     |             |                 |                |                | <u> </u>         | <del>-</del> :-     |                     |
|                     |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                  |                    |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |             |                 |                | ٠              |                  | :                   |                     |
| 3: 6,               | 9:6                 | 8: 5,               | t: 5,               | 6: 5,               | 8: 5,               | 1:4,               | 11: 4,             | 0: 4,               | 7:4,                | 5: 4,               | 7: 4,            | 3:4,               | 3:4,               | 2: 4,              | 3:4,                | 8: 3,               | 7: 3,               | 4: 3,               | 1: 3,               | 2: 3,               | 9:3,                | 7:3,                | 2: 3,       | 5:3,            | 3: 3,          | 5:3,           | 70: 3,           | 9:3,                | 0: 5,               |
| .0777: 7, H0013: 6, | H0445: 6, L0599: 6, | J0005: 5, S0358: 5, | S0360: 5, S0414: 5, | H0575: 5, L0776: 5, | S0126: 5, H0648: 5, | H0521: 5, H0171: 4 | H0583: 4, H0341: 4 | S0212: 4, H0580: 4, | H0619: 4, H0427: 4, | S0010: 4, S0346: 4, | H0046: 4, H0457: | H0551: 4, L0763: 4 | .0794: 4, L0803: 4 | 0666: 4, H0522: 4, | .0759: 4, H0543: 4, | H0663: 3, H0638: 3, | S0442: 3, S0007: 3, | S0222: 3, H0244: 3, | S0003: 3, H0591: 3, | H0040: 3, T0042: 3, | S0142: 3, H0529: 3, | .0770: 3, L0637: 3, | : 3, L0662: | F. 3, L0805: 3, | i: 3, L0663: 3 | i: 3, L0665: 3 | H0659: 3, H0670: | S0330: 3, H0539: 3, | S0152: 3, H0626: 3, |
| L0777               | H0445               | 1,0005              | 20360               | H0575               | S0126               | H0521              | H0583              | S0212               | H0619               | S0010               | H0046            | H0551              | 1.0794             | 99907              | L0759               | H0663               | S0442               | S0222               | S0003               | H004C               | S0142               | 1.0770              | L0771: 3, I | L0774: 3, I     | L0655: 3, 1    | L0664: 3, I    | H0659            | 80330               | 20106               |
|                     |                     |                     |                     |                     |                     | •                  |                    |                     |                     |                     |                  |                    |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |             |                 |                | •              |                  | ·,                  |                     |
|                     |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                  |                    |                    |                    |                     |                     |                     | -                   |                     |                     |                     |                     |             |                 |                |                |                  |                     |                     |
|                     |                     |                     |                     |                     |                     |                    |                    |                     | _                   |                     |                  |                    |                    |                    |                     |                     |                     |                     |                     |                     | _                   |                     |             |                 |                |                |                  | :                   |                     |
|                     |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                  |                    |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |             |                 |                |                |                  | :                   |                     |
|                     |                     |                     |                     |                     |                     |                    |                    |                     |                     |                     |                  |                    |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |             |                 |                |                |                  | •                   | _                   |
|                     |                     | ٠                   |                     |                     |                     |                    |                    |                     |                     |                     |                  | •                  | ,                  |                    |                     |                     |                     |                     |                     |                     |                     |                     |             |                 |                |                |                  |                     |                     |
|                     |                     |                     | •                   |                     |                     |                    |                    |                     |                     | -                   |                  |                    |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |             |                 |                |                |                  |                     |                     |
|                     |                     |                     |                     |                     |                     |                    |                    |                     |                     | ٠                   |                  |                    | ٠                  |                    |                     |                     |                     |                     |                     |                     |                     |                     |             |                 |                |                |                  |                     |                     |

|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     | <u> </u>            |                     |                     |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------|---------------------|---------------------|---------------------|---------------------|-------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|----------------|--------------------|---------------------|---------------------|--------------------|---------------------|--------------------|
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
| Ĺ                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
|                    |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |          |                     |                     |                     |                     |       |                     | ٠                   |                    | ,                  |                     |                     |                |                    |                     |                     |                    |                     |                    |
|                    |                     | ر.                  | ລົ                  | ~໌                  | ري                  | ري<br>د             | ~î                  | حر                  | حر                  | ວ໌ເ                 |          | ~5                  | ~າ໌                 | ~î                  | ~ໂ                  | ~5    | ລົ                  | ٠,                  | ~ໂ                 | ດໂ                 |                     | ÷                   | •              | T,                 | •                   | ·                   |                    | •                   |                    |
| 745: 3             | 731:3               | 624: 2              | 444: 2              | 544:                | 024: 3              | 615:                | 032: 2              | 3090:               | 207:                | 344:2               | 422: 2   | 775: 2              | 519:2               | 380: 2              | 555: 2              | 747:2 | 596: 2              | JO588: 2, S0011: 2, | 196: 2             | 424: 2             | 170: 1              | 040:1               | 218: 1         | ,0002: 1, H0657: 1 | 110:1               | 3125:               | 356: 1             | 376: 1              | 046: ]             |
| 3, 1.0             | 3, L0               | 3, H(               | 2, S0               | 2, H(               | 2, H(               | 2, H(               | 2, HC               | 2, H(               | 2, H(               | . 2, S0             | 2, S0    | 2, L0               | 2, HC               | : 2, SC             | 2, HC               | 2,10  | 2, 10               | 2, S0               | : 2, SC            | : 2, SC            | 2, HC               | 1, S0               | 1, S0          | 1, HC              | 1, S0               | : 1, H(             | 1, S0              | 1, S0               | : 1, SC            |
| .0744: 3, L0745: 3 | .0756: 3, L0731: 3, | H0542: 3, H0624: 2, | H0650: 2, S0444: 2, | 10052: 2, H0544: 2, | H0123: 2, H0024: 2, | H0014: 2, H0615: 2, | .0483: 2, H0032: 2, | H0598: 2, H0090: 2, | H0269: 2, H0207: 2, | H0641: 2, S0344: 2, | 30208:   | L0369: 2, L0775: 2, | .0806: 2, H0519: 2, | H0435: 2, S0380: 2, | S0406: 2, H0555: 2, | .0746 | L0755: 2, L0596: 2, | .0588               | H0653: 2, S0196: 2 | H0422: 2, S0424: 2 | S0462: 2, H0170: 1, | L0615: 1, S0040: 1, | <b>[0049</b> ] | 0002               | S0116: 1, S0110: 1, | H0449: 1, H0125: 1, | S0420: 1, S0356: 1 | S0354: 1, S0376: 1, | H0208: 1, S0046: 1 |
|                    |                     | بير                 | <u> </u>            | <u> </u>            | <u> </u>            |                     | <u> </u>            | <u> </u>            | <u> palat</u>       | <u> </u>            | <u> </u> | <u> </u>            |                     | <u> </u>            | <u>(v)</u>          | _==   | Н.                  | <u></u>             | <del>- 1</del>     | <del></del>        | <u>Uj</u>           | <del></del> -       |                | _=                 | <u> </u>            |                     |                    | ری                  |                    |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
|                    |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
|                    | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
|                    |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |          |                     |                     |                     | -                   |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
| -                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |       |                     |                     | ·                  |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
|                    |                     |                     | •                   |                     |                     |                     | ٠                   |                     |                     |                     |          |                     |                     |                     |                     |       | •                   |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                   |          |                     |                     |                     |                     |       |                     |                     |                    |                    | ٠                   |                     |                |                    |                     |                     |                    |                     |                    |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |       |                     |                     |                    |                    |                     |                     |                |                    |                     |                     |                    |                     |                    |

|           |                    |                    |             |             |                    |                  |                    |                    |             | ,                  |                    |                    |                    |                     |                  |             |                    |                    |                    | -                |                    |                  |             |                     |                    | _                  |                    |              |             |
|-----------|--------------------|--------------------|-------------|-------------|--------------------|------------------|--------------------|--------------------|-------------|--------------------|--------------------|--------------------|--------------------|---------------------|------------------|-------------|--------------------|--------------------|--------------------|------------------|--------------------|------------------|-------------|---------------------|--------------------|--------------------|--------------------|--------------|-------------|
|           |                    |                    |             | <del></del> |                    |                  |                    |                    |             |                    |                    |                    |                    |                     |                  |             |                    |                    |                    |                  |                    |                  |             |                     |                    |                    |                    | _            |             |
|           |                    |                    |             |             |                    |                  |                    |                    |             |                    |                    |                    |                    |                     |                  |             |                    |                    |                    |                  |                    |                  | _           |                     |                    |                    |                    |              |             |
| 1 S0300 1 | .0717: 1. H0437: 1 | H0587: 1, T0039: 1 | 1, T0060: 1 | 1, H0156: ] | H0042: 1, H0036: 1 | H0037: 1, H0004: | H0421: 1, S0049: 1 | H0596: 1, H0597: 1 | 1, H0570: 1 | H0571: 1, H0569: 1 | H0015: 1, H0020: ] | S0388: 1, S0051: 1 | H0354: 1, H0510: 1 | S6028: 1, S0214: 1, | H0328: 1, H0688: | 1, T0006: 1 | H0030: 1, H0644: 1 | H0212: 1, S0036: 1 | H0038: 1, H0372: ] | H0634: 1, H0616: | F0067: 1, H0264: 1 | H0488: 1, H0413: | 1, S0440: 1 | H0647: 1, H0646: 1, | H0649: 1, S0002: 1 | S0426: 1, L0598: 1 | .0762: 1, L0638: 1 | 1, L0772: 1  | 1, L0642: 1 |
| 50132.1   | 10717:             | H0587:             | L0586:      | H0250:      | H0042:             | H0037:           | H0421:             | H0596:             | H0545:      | H0571:             | H0015:             | S0388:             | H0354:             | S6028:              | H0328:           | H0039:      | H0030:             | H0212:             | H0038:             | H0634:           | T0067:             | H0488:           | T0069:      | H0647:              | H0649:             | S0426:             | L0762:             | L.0667: 1, I | L0641: 1, 1 |
|           |                    |                    |             |             |                    |                  |                    |                    |             |                    |                    |                    |                    |                     |                  |             |                    |                    |                    |                  |                    |                  |             |                     |                    |                    |                    |              | ٠           |
|           |                    |                    |             |             |                    |                  |                    |                    | _           |                    |                    |                    |                    | - <u>.</u>          | <del></del>      |             |                    |                    |                    |                  |                    |                  |             |                     | -                  |                    |                    |              |             |
|           |                    |                    |             |             |                    |                  |                    |                    | _           |                    | <u> </u>           |                    |                    |                     |                  |             |                    | <del></del>        |                    |                  |                    | <u> </u>         |             | <u>,</u>            |                    |                    | <u>-</u>           |              |             |
|           |                    |                    |             | _           |                    |                  |                    |                    |             |                    |                    |                    |                    |                     |                  |             |                    |                    |                    |                  | <del></del>        | -                | ·           |                     |                    |                    |                    |              | :           |
|           |                    |                    |             |             |                    |                  |                    |                    |             |                    |                    |                    | -                  |                     |                  |             |                    |                    |                    |                  |                    |                  |             |                     |                    |                    |                    |              |             |
|           |                    |                    |             |             |                    |                  |                    |                    |             |                    |                    |                    |                    | •                   |                  |             |                    |                    |                    |                  |                    |                  |             | <del>- 1</del> -1-  |                    |                    |                    |              |             |
|           |                    |                    |             |             |                    |                  |                    |                    |             |                    |                    |                    |                    |                     |                  |             |                    |                    |                    |                  |                    |                  |             |                     |                    |                    |                    |              |             |

|                   |   |                     |                     |                     |                     |                     |                     |                     |                     |  |                         |                     | •                   |                     |                     |                     |                     | -        |                        | 138190,             | 254210,             | 271900,             | 600179,             | 600977,             | 601202,             | 601777              |
|-------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                   |   |                     |                     |                     |                     |                     |                     |                     |                     |  |                         |                     |                     |                     |                     |                     |                     |          |                        | 17p13               | , .                 |                     |                     |                     |                     |                     |
| 10764: 1 10773: 1 | Ţ | L0606: 1, L0661: 1, | L0807: 1, L0527: 1, | L0657: 1, L0659: 1, | L0526: 1, L0518: 1, | L0783: 1, L0809: 1, | L0529: 1, L0532: 1, | S0428: 1, HQ701: 1, | S0374: 1, L0438: 1, |  | <br>H0710: 1, H0214: 1, | S0037: 1, S3014: 1, | L0748: 1, L0751: 1, | L0757: 1, S0031: 1, | H0444: 1, S0436: 1, | L0485: 1, L0608: 1, | L0593: 1, L0594: 1, |          | S0192: 1 and H0677: 1. | L0751: 4, S0358: 3, | L0740: 3, S0418: 2, | S0376: 2, H0318: 2, | H0623: 2, S0210: 2, | L0438: 2, L0741: 2, | L0439: 2, L0747: 2, | H0506: 2, H0171: 1, |
|                   |   |                     |                     |                     |                     |                     |                     |                     | <u> </u>            |  |                         |                     |                     |                     |                     |                     |                     | <u> </u> |                        | Ala-3 to Arg-8,     | Asp-48 to Gly-64,   | Ξ.                  |                     |                     |                     |                     |
|                   |   |                     |                     |                     |                     | _                   |                     | -                   |                     |  | _                       |                     |                     |                     |                     |                     |                     |          |                        | 2939                |                     |                     | ,                   |                     |                     |                     |
|                   |   |                     |                     |                     |                     |                     |                     |                     |                     |  |                         |                     |                     |                     |                     |                     |                     |          |                        | 2 - 403             |                     |                     |                     |                     |                     |                     |
|                   |   |                     | :                   |                     |                     |                     |                     |                     |                     |  |                         |                     |                     |                     |                     |                     |                     |          | •                      | 764                 |                     |                     |                     |                     |                     |                     |
|                   |   | ,                   | <del>- ,</del>      |                     |                     |                     |                     |                     |                     |  |                         |                     |                     |                     |                     |                     |                     |          |                        | 1051246             |                     |                     |                     |                     |                     |                     |
|                   |   | -                   |                     |                     |                     |                     |                     |                     |                     |  |                         |                     |                     |                     |                     |                     |                     |          |                        | HAOSZ53             |                     |                     |                     |                     |                     |                     |

|  | 100690,<br>120180,<br>120180,<br>120180,<br>120180,<br>120190,<br>142989,<br>156232,<br>178600, |
|--|---|
|  | 2q23-q31  |
| H0686: 1, H0656: 1,<br>H0484: 1, S0420: 1,<br>S0356: 1, S0416: 1,<br>H0592: 1, H0333: 1,<br>H0427: 1, S0474: 1,<br>H0546: 1, H0081: 1,<br>H0594: 1, H0267: 1,<br>H0594: 1, H0267: 1,<br>H0599: 1, H0494: 1,<br>H0509: 1, H0633: 1,<br>L0521: 1, H0547: 1,<br>S0126: 1, S0328: 1,<br>S0330: 1, S0380: 1,<br>H0521: 1, H0522: 1,<br>S0330: 1, S038: 1,<br>L0748: 1, L0750: 1,<br>L0748: 1, L0750: 1,<br>H0665: 1, S0276: 1 and | H0596: 1, H0046: 1,<br>H0032: 1 and H0595: 1.   |
|  | Ala-10 to His-29.   |
|  | 2940  |
|  | 130 - 549   |
|  | 765   |
|  | 1051256   |
|  | HSODP14   |

| 266100,<br>600258,<br>600321 |  |   |
|------------------------------|--|---|
|                              |  |   |
|                              | H0659: 4, L0747: 4, S0474: 3, L0777: 3, S0360: 2, L0653: 2, L0656: 2, H0686: 1, H0449: 1, H0587: 1, H0494: 1, S0002: 1, L0770: 1, L0662: 1, L0776: 1, L0655: 1, L0776: 1, L0655: 1, L0665: 1, L0766: 1, L0776: 1, L0655: 1, L0665: 1, L0665: 1, L0665: 1, L0665: 1, L0777: 1 and S0194: 1. | L0766: 4, H0090: 3,<br>H0266: 2, H0529: 2,<br>L0803: 2, L0774: 2,<br>L0779: 2, L0759: 2,<br>S0114: 1, H0583: 1,<br>H0638: 1, S0356: 1,<br>S0410: 1, H0580: 1,<br>H0619: 1, S0222: 1,<br>H0619: 1, H0373: 1,<br>S0003: 1, H0373: 1,<br>H0040: 1, H0616: 1,<br>H00412: 1, L0772: 1, |
|                              | Pro-1 to Trp-12.   | Arg-17 to Gln-24, Tyr-39 to Tyr-47, Arg-50 to Leu-57, Lys-59 to Asn-66, Asn-78 to Val-91, Ser-94 to Ser-133, Thr-139 to Lys-175.  |
|                              | 2941   | 2942  |
|                              | 2 - 199  | 3 - 527   |
|                              | 766  | 797   |
|                              | 1051319  | 1051410   |
|                              | HWLXZ72  | HUSGQ45   |

|   | 106165,                | 117700,             | 126451,             | 169600,             | 180380,             | 180380,             | 180380,             | 276902,             | 600882,             | 601199,             | 601199,             | 601199,             | 601682              |                     |                     |                     |                     |                     |                     |                     |                     |
|---|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   | 3q13.3-q2 <del>4</del> |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0664: 1, H0144: 1,<br>H0689: 1, H0682: 1,<br>H0672: 1, H0539: 1,<br>S0378: 1, L0751: 1,<br>L0745: 1, L0749: 1,<br>L0750: 1, L0731: 1,<br>L0758: 1, L0593: 1,<br>S0242: 1 and S0194: 1. | S0360: 10, S0440: 7,   | H0373: 5, L0666: 5, | L0665: 5, H0423: 5, | S0358: 4, H0486: 4, | L0519: 4, L0663: 4, | H0659: 4, S0330: 4, | L0731: 4, H0422: 4, | H0657: 3, L0471: 3, | H0687: 3, H0553: 3, | H0551: 3, L0598: 3, | L0500: 3, L0770: 3, | L0803: 3, L0775: 3, | L0805: 3, L0659: 3, | L0809: 3, H0710: 3, | L0779: 3, L0777: 3, | S0218: 2, H0341: 2, | H0669: 2, H0662: 2, | S0420: 2, H0580: 2, | S0222: 2, T0039: 2, | H0013: 2, H0251: 2, | H0046: 2, H0457: 2, |
| -   | Lys-46 to Gly-63,      |                     | 26.                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 2943                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ·   | 263 - 676              |                     |                     |                     |                     | -                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
|   | 892                    |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| :   | 1051437                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| ·   | HLDRA54                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|                     |                     |                     |                     | _                    |                      |                     | ···                 | _                   |                     |                     |                     |                     |                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |
|                     |                     |                     |                     |                      |                      |                     |                     |                     |                     |                     |                     |                     |                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| S0366: 2, H0560: 2, | H0561: 2, S0438: 2, | H0509: 2, S0426: 2, | H0529: 2, L0369: 2, | .0648: 2, L.0497: 2, | .0784: 2, L.0526: 2, | .0532: 2, H0547: 2, | H0519: 2, H0435: 2, | H0670: 2, H0648: 2, | S0328: 2, H0539: 2, | S0378: 2, H0696: 2, | S0404: 2, S0406: 2, | H0436: 2, L0740: 2, | 0: 2, L0752: 2, | L0588: 2, L0604: 2, | S0026: 2, H0686: 1, | H0713: 1, H0650: 1, | S0212: 1, H0484: 1, | H0255: 1, H0663: 1, | H0458: 1, S0418: 1, | S0442: 1, H0637: 1, | H0645: 1, S0278: 1, | H0369: 1, H0608: 1, | H0600: 1, H0592: 1, | H0587: 1, H0485: 1, | H0270: 1, T0060: 1, | H0427: 1, H0599: 1, | H0349: 1, H0706: 1, | H0036: 1, H0581: 1, | H0052: 1, H0123: 1, |
| 98036               | H056                | )50H                | H052                | 1064                 | 1078                 | 1.053               | H051                | .90H                | 8032                | 8037                | S040                | H043                |                 | L058                | 2002                | H071                | S021                | H025                | H045                | S044                | 790H                | )H036               | )90H                | H058                | H027                | H042                | H03                 | H00                 | H00                 |
|                     |                     |                     |                     | •                    |                      |                     |                     |                     |                     |                     |                     |                     |                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     | •                   |                     |                     |                      |                      |                     |                     |                     |                     |                     |                     |                     |                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|------------|---------|---------------|----------------|--------------|-----------|-------------|-----------|--------------------|--------|-------------|--------|---------|-------------|-------------|-------------|-------------|-----------|----------|-----------|-------------|--------------------|-----------|--------------------|------------------|--------------------|--------------------|-------------|--------------------|-------------|
| _          | <u></u> | <del></del> - |                |              |           |             |           |                    |        |             |        |         |             |             |             |             |           | -        |           |             |                    |           |                    |                  |                    |                    |             |                    |             |
| <br> -<br> |         |               |                |              |           |             |           |                    |        |             |        |         | ·<br>       |             |             |             |           |          |           |             |                    | 1,        |                    |                  |                    |                    | ·<br>—      |                    | -           |
| 1 H0510    |         | 1, H0169:     |                | -            | 1, H0059: | 1, S0472: 1 | 1, H0652: | H0538: 1, S0422: 1 |        | 1, L0764: 1 |        |         | 1, L0774: 1 | 1, L0655: 1 | •           | 1, L0558: 1 | •         | •        | 1, H0702: | 1, T0068: 1 | S0148: 1, L0438: 1 | 1, H0660: | S0380: 1, H0518: 1 | H0521: 1, H0522: | S0044: 1, H0478: 1 | S0027: 1, L0754: 1 | 1, S0434: 1 | .0485: 1, L0581: 1 | 1, L0362: 1 |
| H0355-1    | H0615   | H0030: 1      | S0364:         | H0038: 1     | H0488:    | H0494:      | H0646: 1  | H0538:             | S0002: | L0769:      | L0773: | 1.0649: | L0522: 1    | T0776:      | L0606: 1    | L0656: 1    | L0518: 1, | L0664: 1 | H0698:    | S0374: 1,   | S0148:             | H0593:    | S0380:             | H0521:           | S0044:             | S0027:             | H0445: 1,   | L0485:             | 1.0599:     |
|            |         |               | •              |              |           |             |           |                    |        |             |        |         |             |             |             |             |           |          |           |             |                    |           |                    |                  |                    | (                  | C           |                    |             |
| <br>       |         | <u>-</u>      |                |              |           |             |           |                    |        |             |        |         |             |             |             | <del></del> |           |          |           |             |                    |           |                    |                  |                    |                    |             |                    | _           |
|            |         |               |                |              | •         | <del></del> |           |                    |        |             |        |         | <u> </u>    |             |             |             |           |          |           | ·           |                    |           |                    |                  |                    |                    | _           | <del>.</del> .     |             |
| _          | ·       |               |                | <del>.</del> | -         |             |           | _                  |        |             |        |         |             |             |             |             |           |          |           |             |                    |           |                    |                  |                    |                    |             |                    |             |
|            |         |               |                |              |           |             |           |                    |        | -           |        |         |             |             |             |             | -         |          |           | -           |                    |           |                    |                  |                    |                    |             |                    |             |
| -          |         | -             | <del>.</del> . |              |           |             |           |                    |        |             |        |         |             |             | <del></del> |             |           |          |           |             |                    |           |                    |                  | <del></del> .      |                    |             | _                  |             |
|            |         |               |                |              | ·         |             |           |                    |        |             |        |         |             |             |             |             |           | _        | -         |             |                    |           |                    |                  |                    |                    |             | _                  |             |

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|  | 106300,               | 108800,             | 120290,             | 120290,             | 120810,             | 120820,             | 142857,             | 142858,             | 150270,             | 167250,             | 170261,             | 177900,             | 179450,             | 201910,             | 217000,             | 222100,             | 233100,             | 235200,           | 248611,             | 256550,             | 256550,             | 600202,             | 600261,             | 601868,             | 602280,             | 602475              |                     |
|  | 6p21.3                |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |
| S0194: 1, H0542: 1,<br>H0543: 1, S0384: 1 and<br>H0506: 1. | L0748: 10, L0747: 10, | .0662: 9, L0596: 7, | H0265: 6, L0666: 6, | .0758: 6, H0081: 5, | .0766: 5, L0665: 5, | .0744: 5, L0750: 5, | S0418: 4, H0617: 4, | H0529: 4, L0659: 4, | .0663: 4, H0144: 4, | 10547: 4, H0657: 3, | 10661: 3, S0046: 3, | H0188: 3, H0687: 3, | H0135: 3, H0551: 3, | S0440: 3, H0647: 3, | .0775: 3, L0655: 3, | .0664: 3, S0406: 3, | .0743: 3, L0740: 3, | .0751:3, L0731:3, | H0445: 3, L0591: 3, | H0543: 3, H0423: 3, | H0686: 2, S0134: 2, | S0420: 2, S0358: 2, | H0013: 2, H0635: 2, | H0618: 2, S0010: 2, | H0545: 2, N0006: 2, | .0471: 2, H0622: 2, | L0455: 2, H0412: 2, |
| N H H  |                       |                     | <u></u>             | 브                   | _=                  | ı                   | S                   | <u>) the</u>        |                     | <u> </u>            | <u>.</u>            | <u> </u>            | <u> </u>            | S                   |                     |                     | <u>,</u>            |                   | <u> </u>            |                     |                     | <u>.va</u>          | <u> </u>            | <u> </u>            |                     | I                   | 1                   |
| ·  | 2944                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del>.</del>        |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     | _                   |
|  | 34 - 1377             |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 69/                   |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 1051533               |                     | ,                   |                     |                     |                     |                     |                     |                     | . —                 |                     |                     |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | HNOJR48               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| 10100: 2, H0494: 2, 10769: 2, L0646: 2, 20774: 2, L0375: 2, 20517: 2, L0438: 2, 10660: 2, H0521: 2, 10696: 2, L0755: 2, L0755: 2, L0755: 2, L0759: 2, L0597: 2, L0597: 2, L0597: 2, H0542: 1, H0548: 1, H0295: 1, H0484: | H0663: 1, H0589: 1,<br>L0005: 1, S0360: 1,<br>H0580: 1, S0007: 1,<br>S0045: 1, L0717: 1,<br>H0609: 1, H0455: 1,<br>H0642: 1, H0486: 1,<br>H0642: 1, H0486: 1,<br>F0060: 1, H0250: 1,<br>H0156: 1, H0706: 1,<br>H0156: 1, H0706: 1,<br>H0156: 1, H0706: 1,<br>H0156: 1, H0706: 1,<br>H0156: 1, H0706: 1,<br>H0156: 1, H0706: 1,<br>H0156: 1, H0706: 1,<br>H0156: 1, H0706: 1, |
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| H0100: 2, H0494: 2,<br>L0769: 2, L0646: 2,<br>L0774: 2, L0375: 2,<br>L053: 2, L0776: 2,<br>L0517: 2, L0438: 2,<br>H0660: 2, H0521: 2,<br>H0696: 2, L0757: 2,<br>L0755: 2, L0757: 2,<br>L0759: 2, L0581: 2,<br>H0542: 2, H0352: 2,<br>H0542: 2, H0352: 1,<br>H0295: 1, S0114: 1,<br>H0381: 1, H0484: 1,<br>S0212: 1, H0484: 1,  | H0663: 1, H0589: 1,<br>L0005: 1, S0360: 1,<br>H0580: 1, S0007: 1,<br>S0045: 1, L0717: 1,<br>H0609: 1, H0455: 1,<br>H0642: 1, H0486: 1,<br>H0642: 1, H0486: 1,<br>T0060: 1, H0250: 1,<br>H0156: 1, H0706: 1,<br>H0036: 1, H0718: 1,<br>H0390: 1, H0318: 1,<br>H0581: 1, H0374: 1,   |
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| H0231: 1, H0439: 1, | H0150: 1, H0050: 1, | H0024: 1, T0010: 1, | ^ | H0615: 1, H0428: 1, | .0194: 1, L0483: 1, | H0096: 1, T0006: 1, | H0031: 1, H0644: 1, | .0142: 1, H0181: 1, | H0606: 1, L0055: 1, | .0456: 1, S0366: 1, | H0090: 1, H0591: 1, | H0038: 1, H0040: 1, | H0087: 1, S0038: 1, | H0022: 1, T0041: 1, | F0042: 1, S0438: 1, | _ | H0641: 1, S0344: 1, | H0538: 1, S0210: 1, | • | L0369: 1, L0762: 1, | • | <br>L0764: 1, L0521: 1, | L0626: 1, L0767: 1, | L0768: 1, L0364: 1, | • | L0533: 1, L0651: 1, | Ŧ, | L0542: 1, L0518: 1, |
|                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |   |                     |   |                         |                     |                     |   |                     |    |                     |
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| L0383: 1, L0528: 1,<br>L0788: 1, L0791: 1,<br>L0532: 1, H0697: 1,<br>H0519: 1, H0593: 1,<br>H0672: 1, H0539: 1,<br>S0152: 1, S0404: 1,<br>H0555: 1, H0436: 1,<br>H0478: 1, H0479: 1,<br>S3014: 1, S0027: 1,<br>L0741: 1, L0745: 1,<br>L0608: 1, L0593: 1, | L0601: 1, L0603: 1,<br>H0668: 1, S0026: 1,<br>H0136: 1, S0192: 1 and<br>H0506: 1. | L0748: 13, L0758: 5,<br>L0749: 4, L0439: 3,<br>H0441: 2, H0052: 2,<br>H0090: 2, L0774: 2,<br>L0775: 2, L0517: 2,<br>L0775: 2, L0517: 2,<br>L0731: 2, L0759: 2,<br>S0134: 1, L0415: 1,<br>H0318: 1, H0327: 1,<br>H0563: 1, S0050: 1,<br>H0594: 1, H0644: 1,<br>H0252: 1, H0644: 1,<br>H0135: 1, H0616: 1,<br>H0264: 1, S0438: 1,   |
|---|---|---|
|   |   | Lys-7 to Glu-27,  Ser-48 to Gln-53,  Gln-58 to Pro-69,  Ala-84 to Tyr-93,  Ala-114 to Leu-127,  L0775: 2, L0774:  Ala-114 to Leu-127,  L0775: 2, L0517:  Ser-173 to Arg-180,  Met-188 to Pro-193,  L0775: 2, L0517:  Ser-173 to Arg-180,  Met-188 to Pro-193,  Met-188 to Pro-193,  Met-28 to Asp-233,  Gln-271 to Cys-281,  H0563: 1, R0566:  H0252: 1, H0644:  H0252: 1, H0646:  H0252: 1, H0643:  H0264: 1, S0438:  L0369: 1, L0763: 3 |
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|   | 114208,<br>114208,<br>119300,<br>120620,<br>120620,<br>120920,<br>134370,<br>134370,<br>134580,<br>145260,<br>150310,<br>179820,<br>191045,<br>600105,<br>601494,  |                     |
|---|--|---------------------|
|   | 1q32   |                     |
| L0796: 1, L0662: 1,<br>L0804: 1, L0375: 1,<br>L0787: 1, S0428: 1,<br>H0593: 1, H0689: 1,<br>H0436: 1, L0743: 1,<br>L0754: 1 and L0603: 1. | AR089: 8, AR053: 6, AR060: 6, AR096: 5, AR039: 5, AR055: 4, AR0104: 4, AR033: 4, AR061: 2, AR052: 0 H0717: 14, H0703: 14, H0688: 6, H0729: 5, H0688: 6, H0729: 5, H0670: 4, S0356: 3, H0670: 4, S0356: 3, H0724: 3, H06494: 3, H0694: 3, H0694: 3, H0694: 3, H0689: 2, H0713: 2, H0689: 2, H0722: 2, H0736: 2, H0722: 2, H0686: 2, H0736: 2, H0722: 2, H0686: 2, H0736: 2, H0722: 2, H0686: 2, H0736: 2, H0722: 2, H0686: 2, H0736: 2, H0722: 2, H0736: 2, H0722: 2, H0736: 2, H07 | H0725: 2, H0723: 2, |
|   | His-152 to Lys-160, AR089: 8, AR053: 6, Gly-276 to Ser-281, AR060: 6, AR096: 5, Ser-376 to Asp-383, AR039: 5, AR055: 4, Arg-389 to Gly-400, AR104: 4, AR033: 4, Ala-512 to Ser-529, AR061: 2, AR052: 0 Asp-576 to Thr-581, H0717: 14, H0703: 14, H0689: 9, H0716: 8, H0689: 0, H0717: 14, H0730: 7, H0687: 5, H0622: 4, H0670: 4, H0684: 4, H0670: 4, S0356: 3, S0376: 3, H0724: 3, H0724: 3, H0615: 3, H0624: 3, H0624: 3, H0624: 3, H0624: 3, H0624: 3, H0689: 3, H0689: 3, H0689: 3, H0689: 3, H0689: 2, H0686: 2, H0171: 2, H0686: 2, H0722: 2, H0036: 2, H0686: 2, H0030: 2, H0686: 2, H0030: 2, H0686: 2, H0030: 2, H0686: 2, H0030: 2, H0686: 2, H0030: 2, H0686: 2, H0030: 2, H0686: 2, H0030: 2, H0686: 2, H0030: 2, H003 | H                   |
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|                     |                     |                    |                  |        |                  |             |          |          |  |          |        |        |        |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
|                     |                     |                    |                  |        |                  |             |          |          |  |          |        |        |        |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    | İ      |
| -                   |                     |                    | _                | _      |                  |             | •        |          |  |          |        |        |        |          |           |        |            |          |        |          |          |                  |                  |           | _                |                  |                  | •                  |        |
| 2,                  | -6                  | ~£                 | 1,               |        |                  | 1,          | •        | 1,       | 1,   | 1,       | 1,     | 1,     | 1,     | 1,       | 1,        | T,     | ٠ <b>.</b> | 1,       |        | <u>,</u> |          |                  | H,               | Τ,        | I,               | -1               | I,               |                    |        |
| H0691: 2, H0521: 2, | S0028: 2, L0744: 2, | .0758: 2, S0031: 2 | 564:             | S0354: | 32:              | 261:        | 22: 1    | 333:     | H0194:                                       | H0597:   | H0046: | H0050: | H0051: | H0213:   | H0038:    | H0551: | S0038:     | L0761:   | L0771: | L0776:   | T0666:   | 52: 1            | :869             | 726:      | H0520: 1, H0690: | H0435: 1, H0660: | H0666: 1, H0539: | 06:1               | L0748: |
| H0,                 | 1.07                | 800                | H0542: 2, H0664: | , S03  | H0580: 1, S0132: | I, H0261:   | , S0222: | , Н0333: | , HO   | , HO.    | , HO   | , HO   | , HO   | H02      | H00       | , HO   | , SOC      | 1.00     | 1507   | 57,      | 7,       | .0665: 1, S0052: | H0697: 1, H0698: | I, H0726: | HO,              | ,<br>HO          | , HO             | S0390: 1, S0206: 1 | 150    |
| 11:2                | %<br>2,             | %<br>2, 2,         | 12: 2            | 52: 1  | 30:1             | 19:1        |          | 55: 1    | 36: 1  | 53: 1    | 15: 1  | 9:1    | 12: 1  | 6: 1,    | .0456: 1, | 16: 1  | H0059: 1   | 10561: 1 | 4: 1,  | 56: 1,   | 7:1      | 55: 1,           | 77: 1            | 4: 1,     | 20:1             | 35: 1            | 56: 1            | Ö: 1,              | 13: 1, |
| H069                | <b>S002</b>         | 1075               | H054             | H0662: | H058             | H0619: 1    | S6016: 1 | H0455:   | H0486:                                       | H0263: 1 | H0545: | H0009: | H0012: | T0006: 1 | 1045      | H0616: | H00;       | H05      | L0374: | T0766:   | L0527: 1 | 7007             | 90H              | S0374: 1  | H05              | H04              | H066             | S035               | L0743: |
|                     |                     |                    |                  |        |                  |             |          |          |  |          |        |        |        | _        |           |        |            |          |        |          |          |                  |                  |           |                  | -                |                  |                    |        |
|                     |                     |                    |                  |        |                  |             |          |          |  |          |        |        |        |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
|                     |                     |                    |                  |        |                  |             |          |          |  |          |        |        |        |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
|                     |                     |                    |                  |        |                  |             |          |          |  |          |        |        | •      |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
| _                   |                     |                    |                  |        |                  | <del></del> |          |          | <u>.                                    </u> |          |        |        |        |          |           |        |            | _        |        |          |          |                  |                  |           |                  |                  |                  |                    | _      |
|                     |                     |                    |                  |        |                  |             |          |          |  |          |        |        |        |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
| $\vdash$            |                     | -                  |                  |        |                  |             |          |          |  |          |        |        |        |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
|                     |                     |                    |                  |        |                  |             |          |          | •  |          |        |        |        |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
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|                     |                     |                    |                  |        |                  |             |          |          |  |          |        |        | _      |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
| _                   |                     |                    |                  |        |                  |             |          |          |  | _        | _      |        |        |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
|                     |                     |                    |                  |        |                  |             |          |          |  |          |        |        |        |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
|                     |                     |                    |                  |        |                  |             |          |          |  |          |        |        |        |          |           |        |            | •        |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
| _                   |                     |                    |                  |        |                  |             |          |          |  |          |        |        |        |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
|                     |                     |                    |                  | ٠      |                  |             |          |          |  |          |        |        |        |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
|                     |                     |                    |                  |        |                  |             |          |          |  |          |        |        |        |          |           |        |            |          |        |          |          |                  |                  |           |                  |                  |                  |                    |        |
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|   |  | 154275,<br>162200,<br>162200,<br>182138,<br>239100,<br>600881,<br>601954,                                  |
|---|--|--|
|   |  | 17911.2  |
| L0740: 1, L0754: 1,<br>L0779: 1, L0777: 1,<br>L0731: 1, S0394: 1,<br>S0460: 1 and H0677: 1. | H0660: 3, S0358: 2,<br>L0755: 2, L0759: 2,<br>H0624: 1, S0040: 1,<br>S0342: 1, H0484: 1,<br>H0638: 1, H0427: 1,<br>H0706: 1, S0010: 1,<br>S0182: 1, H0612: 1,<br>H0405: 1, H0647: 1,<br>S0182: 1, H0649: 1,<br>C0042: 1, H0649: 1,<br>F0042: 1, H0647: 1,<br>S0150: 1, H0647: 1,<br>S0144: 1, L0772: 1,<br>L0766: 1, H0520: 1,<br>H0547: 1, H0435: 1,<br>H0547: 1, H0435: 1,<br>L0750: 1, L0777: 1,<br>L0750: 1, L0777: 1, | H0666: 440, H0660: 3,<br>H0309: 1, L0471: 1,<br>H0328: 1, H0383: 1,<br>L0769: 1, L0789: 1 and<br>S0152: 1. |
| 1   | Phe-59 to Glu-68, Lys-105 to Gly-111.  |  |
|   | 2947   | 2948   |
|   | 793 - 200  | 3 - 968  |
|   | 772  | 773  |
|   | 1051953  | 1051983  |
|   | HPTGB84  | HVCCD05  |

|     | $\mid \rightarrow \mid$ |           |      |  | 1 1   |        | 602403             |
|-----|-------------------------|-----------|------|--|---|--------|--------------------|
| 774 | 4                       | 2 - 583   | 2949 | Ile-1 to Pro-10,<br>Pro-36 to Glu-43,    | L0751: 11, L0777: 9,<br>L0809: 6, H0100: 4, | 9q34   | 125270,<br>125270, |
|     |                         |           |      | Arg-92 to Cys-98, Gin-106 to Lys-115     | H0112: 3, L0783: 3,                         |        | 128100,            |
|     |                         |           | •    | Pro-174 to Leu-179, H0670: 2, L0755: 2,  | H0670: 2, L0755: 2,                         |        | 191100,            |
|     |                         |           |      |  | S0040: 1, H0013: 1,                         |        | 215700,            |
|     |                         |           |      |  | H0031: 1, L0794: 1,                         |        | 223360,            |
|     |                         |           |      | - 3-                                     | H0144: 1 and L0759: 1.                      |        | 268900,<br>601850  |
| 775 | ⊢                       | 155 - 844 | 2950 | Pro-8 to Asp-23,                         | H0641: 1, L0775: 1                          |        |                    |
|     |                         | -         |      |  | and H0659: 1.                               |        | ,                  |
|     |                         |           |      | Thr-40 to Arg-69,                        |   |        |                    |
|     |                         |           |      | Arg-73 to Asp-97,                        |   |        |                    |
|     |                         |           |      | Asp-108 to Asp-                          |   |        |                    |
|     |                         |           |      | Glu-135 to Ile-159,                      |   |        |                    |
|     |                         |           |      | Pro-176 to Ala-181,                      |   |        |                    |
|     |                         |           |      | Lys-184 to Asp-192,                      |   |        |                    |
|     |                         |           |      | Val-202 to Arg-210,                      |   |        |                    |
|     | _                       |           |      | Thr-215 to His-221.                      |   |        |                    |
| 116 |                         | 2 - 652   | 2951 | Ala-1 to Ala-8,                          | •   | 7q21.1 | 129900,            |
|     |                         |           |      | Pro-26 to Tyr-32,                        | L0777: 5, H0171: 4,                         |        | 154276,            |
|     |                         |           |      | Gly-48 to Pro-53,                        | H0341: 4, S0408: 4,                         |        | 171050,            |
|     |                         |           |      | Asp-132 to Gly-137, H0597:-4, H0620: 4,  | H0597: 4, H0620: 4,                         |        | 171060,            |
|     |                         |           |      | Val-139 to Leu-144, L0754: 4, L0749: 4,  | L0754: 4, L0749: 4,                         |        | 602136,            |
|     |                         |           |      | Lys-165 to Gly-171, S0360: 3, H0596: 3,  | S0360: 3, H0596: 3,                         |        | 602136,            |
|     |                         |           |      | Ser-191 to Ala-198. [H0545: 3, H0494: 3, | H0545: 3, H0494: 3,                         |        | 602136,            |
|     |                         |           | · -  |  | S0210: 3, L0769: 3,                         |        | 602447             |
|     | -                       |           | •    |  | S0374: 3, H0659: 3,                         |        |                    |

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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | •                   |                     |                  |                  |                  |                  |                  | •   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| ١.                  |                     |                     |                     | ٠,٢                 | ٠,                  | ٠,                  | ٠,                  | •                   | •                   | •                   |                     |                     |                     | _                   |                  |                  | •                |                  |                  | •   | •                | •                | •                | _                | •                | _                |                  |                  | •                |
| 57:2                | 76:2                | 5: 2,               | 2: 2,               | 13:2                | 14:2                | 28: 2               | 00:2                | 52: 2               | 38: 2               | 26:2                | <b>13: 2,</b>       | 51: 2               | 26:2                | 6: 2,               | 49: 1            | 56: 1            | 56: 1            | 0: 1,            | 32: 1            | 00:1  | 22: 1            | 99: 1            | 99:1             | 9: 1,            | 27: 1            | 51: 1            | 83: 1            | 71: 1            | 99:1             |
| H06                 | S037                | S004                | S022                | H00                 | H00                 | H03                 | H01                 | 1066                | 104                 | S012                | 1074                | L075                | S002                | <b>S019</b>         | T00              | H06              | S035             | <b>S041</b>      | S01              | S03(  | 106              | T01(             | H05              | S004             | H03              | H00              | H00              | H02              | H02              |
| 2,                  | I: 2,               | .2                  | 2,3                 | 1:2,                | 2.2                 | 5: 2,               | <b>4:</b> 2,        | 1:2,                | 3:2                 | 7:2,                | . 2,                | 3. 2,               | 5:2,                | 2,                  | 5: 1,            | 3: 1,            | 8: 1,            | F. 1,            | 0:1,             | 3: 1,   | 5: 1,            | 5:1,             | . 1,             | ): 1,            | <del>.</del>     | 3: 1,            | 5: 1,            | 9: 1,            | 8: 1,            |
| S0040: 2, H0657: 2, | H0661: 2, S0376: 2, | S0007: 2, S0045: 2, | S0046: 2, S0222: 2, | H0431: 2, H0013: 2, | H0530: 2, H0014: 2, | H0266: 2, H0328: 2, | H0644: 2, H0100: 2, | .0771: 2, L0662: 2, | .0803: 2, L0438: 2, | H0547: 2, S0126: 2, | S0330: 2, L0743: 2, | .0439: 2, L0751: 2, | H0445: 2, S0026: 2, | 30276: 2, S0196: 2, | H0265: 1, T0049: | S0218: 1, H0656: | H0638: 1, S0356: | S0444: 1, S0410: | H0580: 1, S0132: | H0393: 1, S0300:                              | H0586: 1, L0622: | H0486: 1, T0109: | S0280: 1, H0599: | S0010: 1, S0049: | H0204: 1, H0327: | H0123: 1, H0051: | H0275: 1, H0083: | H0629: 1, H0271: | H0188: 1, H0290: |
| S                   | <u> </u>            | S                   | S                   | Œ                   | <u>;=</u> ;         | <u>II</u>           | 丑                   | <u> </u>            | <u> </u>            | <u> </u>            | S                   | <u> </u>            | <u>II</u>           | S                   | <u> </u>         | S                | <u> </u>         | S                | <u>II;</u>       | <u>II;</u>                                    | <u>江</u>         | <u>II.</u>       | S                | S                | <u> 11</u>       | <u>111</u>       | <u>;Ц</u>        | <u>II</u>        | <u> </u>         |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  | •                |
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| Ŀ                   |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  | <u>,                                     </u> |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Γ                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  | •                |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| H                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                  |                  |                  |                  |   |                  |                  |                  |                  |                  |                  |                  |                  |                  |

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|-------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|----------------------|--------------------|-------------|--------------|--------------------|--------------|-------------|-------------|-------------|---------------------|--------------------|--------------------|--------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|             |                    | <u>.</u>           |                    | _                  |                    |                     |                     |                      |                    |             |              |                    |              |             |             |             |                     |                    |                    |                    |                     |                    |                     |                     |                     |                     | -                   |                     |                     |
|             |                    |                    |                    |                    |                    |                     |                     |                      |                    |             |              |                    |              |             |             |             |                     |                    |                    |                    |                     |                    |                     |                     |                     |                     |                     |                     | 2: 1.               |
| , T0006: 1, | H0031: 1, H0628: 1 | H0673: 1, H0068: 1 | H0598: 1, H0163: 1 | H0090: 1, H0040: 1 | H0551: 1, H0412: 1 | .0370: 1, H0641: 1, | H0647: 1, L0520: 1, | .0762: 1, L.0770: 1, | 0667: 1, L0764: 1, | , L0794: 1, | l, L0650: 1, | 0774: 1, L0775: 1, | 1, L0806: 1, | , L0776: 1, | , L0540: 1, | , L0383: 1, | .0792: 1, H0520: 1, | H0519: 1, H0689: 1 | H0682: 1, H0666: 1 | H0648: 1, H0672: 1 | S0380: 1, H0518: 1, | H0521: 1, H0522: 1 | S0404: 1, S0406: 1, | H0187: 1, L0612: 1, | .0750: 1, L0731: 1, | .0759: 1, L0588: 1, | .0366: 1, H0136: 1, | S0192: 1, S0194: 1, | H0543: 1 and H0422: |
| S0003: 1    | H0031: 1           | H0673: 1           | H0598: 1           | H0090: 1           | H0551: 1           | L0370: 1            | H0647: 1            | L0762: 1             | 10667: 1           | L0521: 1, 1 | L0766: 1     | L0774: 1           | L0376: 1     | L0653: 1, ] | L0659: 1    | L0384: 1, ] | L0792: 1            | H0519: 1           | H0682: 1           | H0648: 1           | S0380: 1            | H0521: 1           | S0404: 1            | H0187: 1            | L0750: 1            | L0759: 1            | L0366: 1            | S0192: 1            | H0543: 1            |
|             |                    |                    |                    |                    |                    |                     |                     |                      |                    |             |              |                    |              |             |             |             |                     |                    |                    |                    |                     |                    |                     |                     |                     |                     |                     |                     |                     |
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|             |                    |                    |                    |                    |                    |                     |                     |                      |                    |             |              |                    |              | _           |             |             |                     |                    |                    |                    |                     |                    |                     | _                   |                     |                     |                     | <u>.</u>            | ·                   |
|             |                    |                    | <del></del>        |                    |                    |                     |                     |                      |                    |             |              |                    |              |             |             |             |                     |                    |                    |                    |                     |                    |                     |                     |                     |                     | _                   |                     |                     |
|             |                    |                    |                    |                    |                    |                     |                     |                      |                    |             |              |                    |              |             |             |             |                     |                    |                    | <del>_</del>       |                     |                    |                     |                     |                     |                     |                     |                     |                     |
| İ           |                    |                    |                    |                    |                    |                     |                     |                      |                    |             |              |                    |              |             |             |             |                     |                    |                    |                    |                     |                    |                     |                     |                     |                     | -                   |                     |                     |

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|                                 |                            |                     | •                   |                    |                       |                       |                      |                     |                     |                     |                     |                      |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
|                                 |                            | -                   |                     |                    |                       |                       | -                    |                     |                     |                     |                     |                      |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
|                                 |                            | AR104: 3, AR053: 3, | AR096: 3, AR055: 3, | AR061: 3, AR060: 2 | S0358: 15, H0622: 15, | S0354: 14, S0360: 11, | H0435: 11, S0356: 9, | H0039: 9, L0666: 9, | .0751: 9, H0553: 8, | 10506: 8, H0689: 7, | .0748: 7, H0661: 6, | .0659: 6, L.0665: 6, | 30376: 5, L0743: 5, | 10484: 4, H0483: 4, | H0059: 4, L0764: 4, | .0771: 4, L,0662: 4, | .0809: 4, S0330: 4, | H0615: 3, H0688: 3, | H0040: 3, L0763: 3, | .0364: 3, L0774: 3, | .0663: 3, H0683: 3, | H0670: 3, H0672: 3, | J0750: 3, L0731: 3, | 10663: 2, H0549: 2, | H0046: 2, H0014: 2, | H0124: 2, H0494: 2, | S0450: 2, L0374: 2, | .0765: 2, L.0804: 2, | .0378: 2, L0653: 2, |
| 2952 Gly-156 to Met-161, AR039: | Cys-186 to Lys-197. AR089: | <u> </u>            | V                   | 4                  |                       | S                     | <u> </u>             | <u></u>             |                     | <u>, 11</u>         |                     |                      | <u>03</u>           | <u>, 14</u>         |                     |                      | <u></u>             | <u></u>             | <del></del>         | ı                   | <u> </u>            | . /                 | <u></u>             |                     | _ <u></u>           | <u> </u>            | <u> </u>            |                      | I                   |
| 2952                            |                            |                     | ,                   |                    |                       |                       |                      |                     | •                   |                     |                     |                      |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
| 223 - 852                       | <u> </u>                   |                     |                     |                    |                       |                       |                      |                     |                     |                     |                     |                      |                     |                     |                     |                      |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     | ٠.                   |                     |
| 777                             |                            |                     |                     |                    |                       |                       |                      |                     |                     |                     |                     |                      |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      | !                   |
| 1052557                         |                            |                     |                     |                    |                       |                       |                      |                     |                     |                     |                     |                      |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |
| HOGCS42                         |                            |                     |                     |                    | ,                     |                       |                      |                     |                     |                     |                     |                      |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |

|                     | ,                   |          |                    |      |  | •                |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|---------------------|---------------------|----------|--------------------|------|--|------------------|--------------|------------------|----------------|------------------|-----------|------------------|----------|------------------|------------------|--------------------|----------|--------------|--------------------|----------|--------------------|----------|-----------|---------------------|----------|------------------|------------------|------------------|--------------------|
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  | _              |                  |           |                  |          |                  |                  |                    | ·        |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  | •         | •                |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  | •            |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     | _        |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
| 2,                  | ų                   | ั้       | Ļ                  | 1,   | L,   | l,               | <del>_</del> | 7                | <del>_</del> , | Ξ,               | 1,        | 1,               | <u>,</u> | Ļ,               | Ţ,               | <del>_</del> ,     | 1,       | 1,           | 1,                 | Į,       | T,                 | 1,       | 1,        | T,                  | Ţ,       | <b>T</b>         | 1,               | 1,               | 1,                 |
| .0529: 2, H0593: 2, | H0658: 2, S0152: 2, | 9.       | .0601: 2, H0294: 1 | 75:  | H0676: 1, H0370:                             | H0587: 1, H0642: | 8.           | .0040: 1, L0738: | , H0024:       | H0356: 1, H0375: | l, T0023: | .0483: 1, H0033: | , H0644: | H0264: 1, H0488: | H0413: 1, H0334: | 50352: 1, S0306: 1 | 47.      | 52:          | .0373: 1, L0646: 1 | 33:      | L0375: 1, L0376: 1 | L0658: 1 | 2%:       | L0664: 1, S0374: 1, | , H0682: | H0648: 1, S0328: | H0478: 1, S0432: | .0744: 1, L0754: | .0747: 1, L0749: 1 |
| H05                 | <b>S</b> 01         | 2        | <b>T02</b>         | 106  | H03  | H06              | H02          | 8                | 8              | H03              | 5         | 9                | H06      | H04              | H03              | 303                | 90E      | H06          | 8                  | 8        | 3                  | 8        | 105       | <b>S03</b> ′        | HOE      | <b>S03</b>       | <b>S</b> 04      | 50               | L07                |
| 2,1                 | 4                   | .7       | 2,                 | 1,1  | <del>.</del> –                               | Τ,               | 1,           | 1,               | <del>-</del>   | <b>–</b>         | -         |                  | 1        | <u>_</u>         | <u></u>          | 1,5                | 1,1      | <del>_</del> | Ξ,                 |          | Ξ,                 | 1,       | -,        | <u></u>             | <u>-</u> | <del>-</del>     | . <del>.</del> . | 1,               | 1,                 |
| 529                 | 558                 | 139:     | 501:               | 130: | 9/9  | 587              | <u>8</u>     | 3.               | 10620: ]       | 356              | 0194: 1,  | <del>18</del> 3: | 10424: ] | 264              | 413              | S0352: 1           | 3.       | H0646: 1     | 373:               | 248      | 375                | .0806: 1 | .0382: 1, | 26                  | H0690: 1 | 848              | 478              | 4                | 747                |
| 2                   | 昱                   | <u>2</u> | <u> </u>           | 200  | 呈  | 8                | 10           | <u>ន</u>         | <u> </u>       | 呈                | 3         | <u>Š</u>         | 9        | 呈                | 旦                | <u>S</u>           | <u>%</u> | <u> </u>     | <u> </u>           | <u> </u> | 3                  | <u> </u> | <u>0</u>  | <u> </u>            | 出        | 9                | <u>H</u>         | <u>2</u>         | <u>0</u>           |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                | •                |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  | ٠              |                  |           |                  |          | •                |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
| _                   |                     |          |                    |      | <u>.                                    </u> |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  | <del>-</del>     |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     | <u> </u> |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           | •                |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           | _                |          |                  |                  |                    |          | -            |                    |          |                    |          |           |                     |          |                  |                  | _                |                    |
|                     |                     |          |                    |      |  |                  | _            |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          | ·                  | , ,  |  |                  |              |                  |                |                  |           |                  |          | ٠,               |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      | ٠  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
|                     |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |
| L                   |                     |          |                    |      |  |                  |              |                  |                |                  |           |                  |          |                  |                  |                    |          |              |                    |          |                    |          |           |                     |          |                  |                  |                  |                    |

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|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------|---------------------|---------------------|---------------------|--------------|--------------|---------------|--------------|---------------------|---------------------|
|                     | <b></b>             |                       |                     |                     |                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                |                     |                     |                     |              |              |               |              |                     |                     |
|                     |                     |                       |                     |                     |                     | ÷                   |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                |                     |                     |                     |              |              |               |              |                     |                     |
|                     |                     | -                     |                     |                     | <del></del>         |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                |                     |                     |                     |              |              |               |              |                     | -                   |
| .0755: 1, L0759: 1, | .0596: 1, H0543: 1, | S0462: 1 and H0352: 1 | S0358: 4, L0752: 4, | H0012: 3, H0266: 3, | .0740: 3, L0731: 3, | H0615: 2, L0772: 2, | 2, L0565: 2, | .0605: 2, L0608: 2, | .0362: 2, H0423: 2, | H0556: 1, S0114: 1, | S0134: 1, H0341: 1, | H0255: 1, H0664: 1, | H0638: 1, S0356: 1, | H0676: 1, H0441: 1, | H0392: 1, H0613: 1, | H0333: 1, H0632: 1, | ,0021: 1, S0049: 1, | H0251: 1, H0327: 1, | H0572: 1, L0471: 1, | : 1, H0252: 1, | 10023: 1, H0135: 1, | H0591: 1, H0560: 1, | S0150: 1, L0637: 1, | 1, L0764: 1, | 1, L0803: 1, | 1, L0647: 1,  | 1, L0663: 1, | H0144: 1, S0374: 1, | H054/: 1, H0690: 1, |
| 1.0755:             | 1.0596:             | S0462:                | 80358               | H0012:              | 1.0740:             | H0615:              | L0776: 2, I  | L0605:              | 1.0362:             | H0556               | S0134;              | H0255               | H0638               | H0676               | H0392               | H0333               | 1.0021:             | H0251               | H0572               | H0271:         | T0023:              | H0591               | S0150:              | L3904: 1,    | L0364: 1,    | L0661: 1,]    | L0790: 1, ]  | H0144               | H024/               |
|                     |                     |                       |                     |                     |                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                |                     |                     |                     |              |              |               |              |                     |                     |
|                     |                     |                       |                     |                     |                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                |                     | ٠                   |                     |              |              |               |              |                     |                     |
|                     |                     |                       | 2953                |                     | •                   |                     |              |                     |                     |                     | <u> </u>            |                     |                     | -                   |                     |                     | _                   |                     |                     |                |                     |                     |                     |              |              |               |              |                     |                     |
|                     |                     |                       | 29 - 745            |                     |                     |                     |              |                     |                     |                     | -                   |                     |                     | _                   |                     |                     |                     |                     |                     |                |                     |                     |                     |              |              |               |              |                     |                     |
|                     |                     |                       | 2778                |                     |                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                |                     |                     |                     |              |              |               |              |                     |                     |
|                     |                     |                       | 1052593             |                     |                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                |                     |                     |                     |              |              |               |              |                     |                     |
|                     |                     |                       | HAZAA59             |                     |                     |                     |              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                |                     |                     |                     |              |              |               |              |                     |                     |

|                     |                     |                     |                     |                     |                        | - :       |                     |                        |                   |                    |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|------------------------|-------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                        |           |                     |                        |                   |                    |                     |                     |                     |                     |                     |                     |                        |           |                     |                     | -                   |                     |                     |                     |                     | ~                   |                     |                     |                     |
| H0670: 1, H0672: 1, | H0539: 1. S0406: 1. | H0555: 1, L0356: 1, | L0742: 1, L0748: 1, | L0746: 1, L0779: 1, | L0758: 1, H0445: 1 and | S0026: 1. | H0619: 3, H0662: 2, | H0135: 1, H0593: 1 and | H0658: 1.         |                    |                     |                     | L0789: 4, H0660: 2, | S0278: 1, H0250: 1, | T0010: 1, H0163: 1, | H0551: 1, L0657: 1, | L0777: 1, L0755: 1 and | L0731: 1. | H0341: 3, H0580: 2, | S0049: 2, S0422: 2, | T0049: 1, H0656: 1, | S0222: 1, H0632: 1, | H0486: 1, H0581: 1, | H0266: 1, H0494: 1, | S0438: 1, H0520: 1, | H0659: 1, H0704: 1, | S0406: 1, L0754: 1, | L0747: 1, L0750: 1, | L0752: 1, L0757: 1, |
|                     |                     |                     |                     |                     |                        | . !       | Pro-12 to Asp-20,   | Leu-30 to Glu-37,      | Lys-62 to Asp-70, | Met-99 to Asp-109, | Ala-115 to Asn-122, | Gly-135 to Asp-141. | Gly-9 to Thr-24.    |                     |                     |                     |                        |           | Gln-17 to Gly-27,   | Glu-39 to Asp-52,   | Lys-79 to Asn-84.   | ·                   |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | 2954                |                        |                   |                    |                     |                     | 2955                |                     |                     |                     | ,                      |           | 2956                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     | -                   |                        |           | 248 - 670           |                        |                   |                    |                     | -                   | 623 - 1033          |                     |                     |                     |                        |           | 120 - 431           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | 622                 |                        |                   |                    |                     |                     | 780                 |                     |                     |                     |                        |           | 781                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | 1052728             |                        |                   |                    |                     |                     | 1052874             |                     |                     |                     |                        |           | 1053037             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | -                   |                     |                     |                     |                        |           | HPDRP02             |                        |                   |                    |                     |                     | HMALJ21             |                     |                     |                     |                        |           | HLYAR61             |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |

|                        |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |
|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                        | 131950,             | 153840,             | 600669,             | 601282,             | 601455,             | 602232              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     | ;                   |
|                        | 8q24                |                     |                     |                     |                     |                     |                     |                     | •                   | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     | <del></del>         |
| H0445: 1 and S0276: 1. | H0616: 5, L0758: 4, | L0362: 4, H0529: 3, | L0803: 3, L0809: 3, | H0592: 2, L0804: 2, | L0527: 2, L0665: 2, | H0547: 2, L0439: 2, | L0754: 2, L0777: 2, | L0485: 2, S0114: 1, | H0657: 1, H0341: 1, | S0420:-1, S0442: 1, | S0358: 1, S0376: 1, | H0675: 1, H0580: 1, | H0632: 1, S0414: 1, | H0013: 1, H0706: 1, | H0327: 1, H0123: 1, | H0428: 1, H0622: 1, | H0090: 1, H0038: 1, | H0551: 1, H0412: 1, | S0450: 1, S0438: 1, | H0647: 1, L0763: 1, | L0770: 1, L0769: 1, | Ę, | L0794: 1, L0776: 1, | L0659: 1, L0526: 1, | L0783: 1, L0666: 1, | L0663: 1, L0438: 1, | H0690: 1, H0659: 1, | H0670: 1, H0672: 1, | H0710: 1, H0436: 1, |
|                        |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u> </u>            | <u> </u>            |                     |                     | . =                 |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |
|                        |                     |                     |                     | ·                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |
|                        | 2957                |                     |                     |                     | <u>,</u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |
|                        | 2 - 562             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     | -                   | ,                   |                     |                     |                     |
|                        | 782                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |
|                        | 1053164             |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |    |                     |                     |                     |                     |                     |                     | _                   |
|                        | HLTCQ80             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |

PCT/US01/18569

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|                        |           |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |                     |                     |                     |                     |                     | =                   |                     |                     |                     | <del></del>         |                     |                        |                      |                     |                     |                     |
| S0028: 1, L0779: 1 and | .0731: 1. | L0362: 6, H0486: 3, | S0406: 3, L0809: 2, | S0434: 2, H0624: 1, | H0663: 1, S0376: 1, | S0360: 1, H0329: 1, | S0046: 1, H0586: 1, | H0150: 1, L0483: 1, | H0096: 1, H0124: 1, | H0591: 1, S0422: 1, | L0598: 1, L0369: 1, | L0763: 1, L0638: 1, | L0521: 1, L0662: 1, | L0766: 1, L0803: 1, | L0776: 1, L0655: 1, | L0657: 1, L0659: 1, | L0793: 1, L0666: 1, | L0665: 1, L0565: 1, | H0520: 1, H0519: 1, | H0684: 1, H0648: 1, | H0521: 1, H0696: 1, | L0747: 1, L0779: 1, | L0777: 1, L0752: 1, | L0758: 1, L0608: 1, | H0506: 1 and H0352: 1. | L0493: 10, L0748: 6, | L0601: 5, H0615: 4, | L0741: 4, H0052: 3, | L0774: 3, L0776: 3, |
|                        |           | Ser-9 to Gln-19.    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Ala-1 to Arg-6,      | Gly-45 to Gly-51,   | Ser-53 to Lys-69,   | Asp-89 to Ser-100,  |
|                        |           | 2958                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2959                 |                     |                     |                     |
|                        |           | 485 - 697           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                        | 210 - 1289           |                     |                     |                     |
|                        |           | 783                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 784                  |                     |                     |                     |
|                        |           | 1053171             |                     | •                   | 1                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1053173              |                     |                     |                     |
|                        |           | HDTDU67             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HMABL01              |                     |                     |                     |

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| LQ754: 3, L0749: 3, S0222: 2, H0318: 2, H0620: 2, S0422: 2, L0500: 2, L0769: 2, L0766: 2, L0375: 2, L0514: 2, L0793: 2, S0126: 2, S6024: 1, H0425: 1          | 1, H0586:<br>1, H0331:<br>1, L0622:<br>1, T0082:<br>1, L0563: 1 | 1, L0471: 1, H0356: 1, H0428: 1, T0006: 1 | 1, T0067:<br>1, H0059:<br>1, S0426: 1<br>1, L5575:   | L0497:<br>L0805:<br>L0789:<br>L0663:          | L0664: 1, H0144: 3<br>S0374: 1, L0438: 1<br>H0547: 1, H0519:<br>H0593: 1, H0658: |
| 20754: 3, L<br>20222: 2, H<br>10620: 2, S<br>20500: 2, L<br>20766: 2, L<br>20514: 2, L<br>20126: 2, S   |   | `નેનેને                                   | 0424: 1, 1<br>0487: 1, 1<br>0144: 1, S<br>0770: 1, I | 0,708: 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, | 74: 1, 1<br>74: 1, 1<br>77: 1, 1<br>93: 1, 1                                     |
|   | H0393: 1<br>H0497: 1<br>H0574: 1<br>H0013: 1<br>S0010: 1        | H0597:<br>H0012:<br>H0328:<br>H0339-      | H0424:<br>H0487:<br>S0144: 1<br>L0770:               | L0499:<br>L0806:<br>L0783:<br>L0666:          | L0664:<br>S0374: 1<br>H0547:<br>H0593:   |
| ly-124<br>ly-124<br>er-176<br>ys-301<br>ys-313<br>ln-327<br>ro-341  |   |   |  |   |  |
| Pro-106 to Leu-117,<br>His-119 to Gly-124,<br>Asp-166 to Ser-176,<br>Ser-293 to Cys-301,<br>Pro-306 to Cys-313,<br>Ser-317 to Gln-327,<br>Arg-332 to Pro-341. |   |   |  |   |  |
| Pro-10<br>His-11<br>Asp-10<br>Ser-29<br>Pro-30<br>Ser-31<br>Arg-33  |   |   |  |   |  |
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|   | 114290,<br>138033,<br>162100,<br>170500,<br>170500,<br>180860,<br>264470   |
|---|--|
|   | 17925  |
| S0032: 1, L0740: 1,<br>L0755: 1, L0758: 1,<br>H0444: 1, L0596: 1 and<br>S0192: 1. | H0656: 6, H0521: 6,<br>H0543: 4, S0002: 3,<br>L0766: 3, H0664: 2,<br>H0581: 2, L0767: 2,<br>L0771: 2, L0767: 2,<br>L0794: 2, L0789: 2,<br>H0593: 2, H0436: 2,<br>H0542: 2, H0423: 2,<br>H0542: 1, H0685: 1,<br>H0657: 1, H0685: 1,<br>S0418: 1, S0354: 1,<br>S046: 1, S0278: 1,<br>H0611: 1, H0586: 1,<br>H0611: 1, H0637: 1,<br>H0622: 1, H0657: 1,<br>H0622: 1, H0657: 1,<br>H0622: 1, H0657: 1,<br>H0622: 1, H0657: 1,<br>H0647: 1, H0623: 1,<br>H0647: 1, H0623: 1,<br>H0647: 1, H0623: 1,<br>H0647: 1, H0623: 1,  |
| 5 11 11 5   | His-10 to Ala-18,  Lys-77 to Glu-86,  Gln-137 to Trp-143, L0766: 3, H0664: 2,  Gln-256 to Asp-263, H0581: 2, H0488: 2,  Glu-276 to Arg-285. L0771: 2, L0767: 2,  L0794: 2, L0789: 2,  H0593: 2, H0436: 2,  H0593: 2, H0436: 2,  H0593: 2, H0436: 1,  H0642: 1, H0685: 1,  H0647: 1, H0637: 1,  H0647: 1, H0657: 1,  H0647: 1, H0657: 1,  H0647: 1, H0657: 1,  H0647: 1, H0653: 1,  H0647: 1, H0653: 1,  H0647: 1, H0653: 1,  H0647: 1, H0653: 1,  H0647: 1, H0653: 1,  H0647: 1, H0653: 1,  H0647: 1, H0653: 1,  H0647: 1, H0623: 1,  H0647: 1, H0623: 1,  H0647: 1, S0144: 1, |
| ,   | 2960   |
|   | 2631   |
|   | 785  |
|   | 1053236  |
|   | HACMU05  |

|  | ·  | 108725,<br>120700,<br>133171,<br>136836,<br>145981,<br>147141,<br>164953,<br>188070,<br>601238,<br>601238,<br>602216,   |
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|  |  | 19p13.3   |
| L0761: 1, L0667: 1,<br>L0644: 1, L0768: 1,<br>L0659: 1, L0809: 1,<br>L0790: 1, L0666: 1,<br>L0663: 1, H0703: 1,<br>S0374: 1, H0689: 1,<br>H0684: 1, S0332: 1,<br>H0555: 1, L0609: 1,<br>L0749: 1, L0779: 1 and | H0615: 1, H0428: 1,<br>L0638: 1, L0764: 1,<br>L0659: 1, L0438: 1,<br>L0352: 1, H0648: 1,<br>L0439: 1 and L0731: 1. | H0135: 13, H0052: 9,<br>H0539: 8, H0521: 8,<br>H0013: 7, L0769: 7,<br>L0566: 7, L0750: 7,<br>L0599: 7, S0007: 6,<br>H0619: 6, H0333: 6,<br>H0048: 6, S0010: 6,<br>H0144: 6, H0593: 6,<br>H0144: 6, H0593: 6,<br>L0745: 6, H0656: 5,<br>H0197: 5, H0100: 5,<br>L0520: 5, L0776: 5,<br>L0655: 5, L0776: 5,<br>L0655: 5, L0517: 5, |
|  | Ala-8 to Gly-15,<br>Gln-44 to Asn-52,<br>Gly-62 to Ser-68.   |   |
|  | 2961   | 2962  |
|  | 3 - 587  | 2 - 610   |
|  | 786  | 787   |
|  | 1053369  | 1053547   |
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| 5,                 | ۶,                 | 5,                 | 4,                 | 4,                 | 4,                  | 4,                  | 4,                  | 4,                 | ٠ç:                 | .3,                 | .3                 | ٠ <u>.</u>          | ω,                 | .3                 | 3,                  | ຕໍ                 | · 6                 | 33                  | 6                   | <del>ر</del> ئ      | က်                  | 7,                  | ર્લ                 | .,                  | ર્વ                 | 2,                  | ų                   | 2,                  | 4         |
| H0522: 5, S0044: 5 | .0744: 5, L0747: 5 | .0779: 5, H0423: 5 | 30360: 4, L0665: 4 | H0547: 4, H0519: 4 | S0126: 4, H0555: 4, | H0436: 4, S0028: 4, | .0439: 4, L0740: 4, | .0758: 4, H0445: 4 | H0255: 3, H0069: 3, | H0618: 3, H0581: 3, | H0457: 3, H0150: 3 | H0050: 3, H0687: 3, | H0622: 3, H0424: 3 | H0617: 3, H0087: 3 | T0067: 3, L0662: 3, | .0649: 3, L0774: 3 | .0659: 3, L0530: 3, | S0374: 3, L0438: 3, | H0672: 3, S0380: 3, | .0751: 3, L0759: 3, | .0596: 3, L0589: 3, | H0506: 3, S0040: 2, | S0114: 2, T0049: 2, | H0583: 2, H0657: 2, | S0116: 2, S0212: 2, | H0662: 2, H0402: 2, | S0356: 2, S0045: 2, | S0046: 2, H0369: 2, | H0586: 2, |
| 5, S0              | 5, 1.0             | 5, HC              | 4,10               | 4, H(              | t, H0               | 4, S0               | 4, LO               | 4, HC              | 3, H(               | 3, H(               | 3, H(              | 3, H(               | 3, H(              | 3, H(              | 3, 1.0              | 3,10               | 3, 10               | 3,10                | 3, SC               | 3, 120              | 3, 1.0              | 3, SC               | 2, T0               | 2, H(               | 2, S0               | 2, H(               | 2, S0               | 2, HC               | 2, HC     |
| 522:               | 4                  | .6/                | 7:09               | 547:               | 26: 4               | 436:                | 139: 4              | 758:               | 255:                | 518:                | 457:               | 50:                 | 522:               | 517:               | )67:                |                    | 559:                | 74:                 | 572:                | 751:                | :96:                | 506:                | 14: 7               | 583:                | 116: 2              | 562:                | 356: 3              | .:94                | S0222: 2, |
| Ë                  | 5                  | 5                  | <b>S</b> 03        | )H                 | <u>S</u> 0          | Ř<br>H              | 2                   | 5                  | H0;                 | <u>H</u>            | ÒΗ                 | <u>H</u>            | <u>H</u>           | Ř                  | Ţ                   | 2                  | ğ                   | S03                 | Ĕ                   | 5                   | Š                   | )H                  | SO.                 | H                   | SO.                 | Ĕ                   | <u>S</u> 03         | 200                 | S02       |
|                    |                    |                    |                    |                    |                     |                     |                     |                    |                     |                     |                    |                     |                    |                    |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |           |
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| 0575: 2,           | 123: 2,             | 620: 2,          | 0373: 2,         | 0099: 2,            | 1250: 2,            | 0006: 2,            | )455: 2,            | 634: 2,             | 0641: 2,         | 210: 2,             | )637: 2,            | 646: 2,             | 775: 2,             | 526: 2,             | 809: 2,     | 053: 2,             | 0520: 2,            | 0651: 2,         | 7406: 2,            | )611: 2,            | 741: 2,             | 749: 2,           | 777: 2,             | 1434: 2,            | 592: 2,              | 593: 2;          | 361: 2,             | 603: 2,             | S0194: 2,    |
| H0587: 2, H0575: 2 | S0346: 2, H0123: 2, | .0471: 2, H0620: | H0199: 2, H0373: | H0356: 2, H0099: 2, | H0271: 2, S0250: 2, | H0688: 2, T0006: 2, | H0181: 2, L0455: 2, | S0366: 2, H0634: 2, | H0561: 2, H0641: | S0142: 2, S0210: 2, | H0529: 2, L0637: 2, | .0761: 2, L0646: 2, | .0803: 2, L0775: 2, | .0636: 2, L0526: 2, | )518: 2, L( | L0789: 2, S0053: 2, | H0693: 2, H0520: 2, | H0658: 2, H0651: | H0710: 2, S0406: 2, | H0478: 2, L0611: 2, | S0027: 2, L0741: 2, | .0754: 2, L.0749: | J0756: 2, L0777: 2, | .0731: 2, S0434: 2, | .0597: 2, L.0592: 2, | .0581: 2, L0593: | .0595: 2, L0361: 2, | .0601: 2, L0603: 2, | S0026: 2, SC |
| 国                  | S                   | ĭ                | 五                | 王                   | 王                   | <u> </u>            | Ē                   | S(                  | 王                | <u>8</u>            | 王                   | ĭ                   | ĭ                   | ĭ                   | ĭ           | ĭ                   | 正                   | 王                | 革                   | 王                   | S                   | ĭ                 | <u> </u>            | ĭ                   | ī                    | ĭ                | ĭ                   | <u> </u>            | S            |
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|                  |                  |                   |                  |                  |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  |                           |
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|                  |                  |                   |                  |                  |                  |                    |             |                  |        | ,                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  |                           |
| 55: 1,           | 86: 1,           | 2: 1,             | 53: 1,           | 38: 1,           | 4: 1,            | 6: 1,              | 37: 1,      | 33: 1,           | 50: 1, | 22: 1,           | 49: 1,           | <b>10:</b> 1,    | 35: 1,           | 99: 1,           | 36: 1,           | 48: 1,           | 74: 1,           | 9.1,             | 69: 1,           | 54: 1,           | 33: 1,           | 38: 1,             | 18: 1,       | 22: 1,           | 39: 1,           | 31: 1,           | 4: 1,            | 55: 1,           | 56: 1,                    |
| H0543: 2, H0265: | H0556: 1, H0686: | S0218: 1, S0282:  | H0254: 1, H0663: | H0306: 1, H0638: | S0418: 1, S0354: | 50358: 1, S0376: 1 | H063        | L0476: 1, H0393: | H05    | 36016: 1, H0392: | H0249: 1, H0249: | H0600: 1, T0040: | 70060: 1, H0635: | H0427: 1, H0599: | H0706: 1, H0036: | 10253: 1, T0048: | H0318: 1, S0474: | S0049: 1, H0309: | H0046: 1, H0569: | H0081: 1, H0154: | S0051: 1, H0083: | H023               | <b>S</b> 031 | H0288: 1, S0022: | H0328: 1, H0039: | .0483: 1, H0031: | H0553: 1, H0644: | H0628: 1, L0055: | H0674: 1, L0456:          |
| 13: 2,           | 56: 1,           | 8: 1,             | 54: 1,           | )6: 1,           | 8: 1,            | 8: 1,              | 8: 1,       | 6: 1,            | 37: 1, | 6: 1,            | 55: 1,           | 30: 1,           | 50: 1,           | 27: 1,           |                  | 53: 1,           | 18: 1,           | 9: 1,            | 46: 1,           | 31: 1,           | 11: 1,           | 8: 1,              | 88: 1,       | 88: 1,           | 28: 1,           | 33: 1,           | 53: 1,           | 28: 1,           | 74: 1,                    |
| H05              | H05              | S <sub>0</sub> 21 | H02              | H03              | <b>S</b> 041     | S035               | <b>S040</b> | 107              | H04.   | S601             | H04.             | )<br>H06         | 1000             | <u>H</u> 04      | H07              | H02;             | H03              | S004             | <u>700H</u>      | <u>8</u>         | S005             | S6028: 1, H0238: 1 | H01          | H02              | H03;             | <u>5</u>         | H05              | )<br>H06         | H06                       |
|                  |                  |                   |                  |                  |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  |                           |
|                  |                  |                   |                  | •                |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  |                           |
|                  |                  |                   |                  |                  |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  |                           |
|                  |                  |                   |                  |                  |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  |                           |
|                  |                  |                   |                  | :                |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | ,                |                  |                    |              |                  |                  |                  |                  |                  |                           |
| -                | •                |                   |                  |                  | •                |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <del></del>      |                  |                    |              |                  |                  |                  |                  |                  | $\overset{\cdot}{\dashv}$ |
|                  |                  |                   |                  |                  |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  |                           |
| _                |                  |                   |                  |                  |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | -                |                    |              |                  |                  |                  |                  |                  |                           |
|                  |                  |                   |                  |                  |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  |                           |
|                  |                  |                   |                  | ·                |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | -                |                    |              |                  |                  |                  |                  |                  |                           |
|                  |                  | •                 |                  |                  |                  |                    |             |                  |        |                  |                  | ٠                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  |                           |
|                  |                  |                   |                  |                  |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  |                           |
| -                |                  |                   |                  |                  |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  | $\exists$                 |
|                  |                  |                   |                  |                  |                  |                    |             |                  |        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |              |                  |                  |                  |                  |                  |                           |
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| H0708: 1, S0036: 1, | H0040: 1, H0551: 1, | H0379: 1, H0477: 1, | H0264: 1, H0488: 1, | H0059: 1, S0038: 1, | L0351: 1, H0429: 1, | H0494: 1, H0625: 1, | S0464: 1, H0132: 1, | H0647: 1, H0646: 1, | L0598: 1, L0369: 1, | L0640: 1, L0763: 1, | L0501: 1, L0372: 1, |   | L0661: 1, L0558: 1, | L0540: 1, L0547: 1, | L0783: 1, L0384: 1, | L0541: 1, L0647: 1, | L0532: 1, L0664: 1, | S0052: 1, S0428: 1, | H0697: 1, H0689: 1, | H0682: 1, H0683: 1, | H0648: 1, S0330: 1, | H0518: 1, H0696: 1, | S0190: 1, H0694: 1, | S0404: 1, H0576: 1, | S0390: 1, L0748: 1, | L0752: 1, L0753: 1, | L0485: 1, L0608: 1, | H0665: 1, H0422: 1, | S0424: 1, L0600: 1 and |
| ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | • |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |
|                     |                     |                     |                     | •                   |                     | _                   | -                   |                     |                     |                     |                     | • |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | _                   |                     |                     | _                   |                     |                        |
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| <b>-</b>  |  | I  | Ι                    |   |   |   |                     |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | $\neg$              |
|-----------|--|--|----------------------|---|---|---|---------------------|--|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|           |  |  |                      | 118210, 120550,   | 120570,                                 | 120575,                                 | 121800,             | 130500,                                  | 133200,                                | 138140,             | 138971,             | 171760,             | 171760,             | 172411,             | 185470,             | 230350,             | 255800,             | 600975,             | 602771              |                     |                     |                     |                     |                     |
|           |  |  | 1p36.1-p35           |   |   |   |                     |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0352: 1. | H0415: 2, H0583: 1,<br>H0123: 1, H0623: 1,<br>H0518: 1 and L0779: 1. | H0254: 1, S0278: 1,<br>L0764: 1, H0144: 1,<br>S0424: 1 and H0506: 1. | L0747: 10, L0771: 8, | H0333: 7, H0620: 6,<br>H0545: 5. H0024: 5.                                    | H0551: 5, L0659: 5,                     | L0665: 5, H0012: 4,                     | L0769: 4, L0375: 4, | S0126: 4, L0740: 4,                      | L0754: 4, L0755: 4,                    | L0759: 4, H0294: 3, | S0045: 3, H0550: 3, | L0471: 3, L0794: 3, | H0689: 3, H0682: 3, | L0749: 3, H0624: 2, | H0171: 2, H0251: 2, | H0081: 2, H0050: 2, | H0252: 2, H0428: 2, | H0124: 2, H0068: 2, | L0637: 2, L0368: 2, | L0792: 2, L0565: 2, | L0779: 2, L0777: 2, | L0757: 2, H0352: 2, | H0170: 1, H0685: 1, | S0356: 1, S0376: 1, |
|           | Gln-36 to Leu-47,<br>Glu-55 to Asn-64.                               | Pro-26 to Ala-33,<br>Gly-68 to Gln-75.                               | Glu-1 to Gly-11,     | Gln-83 to Asp-98, H0333: 7, H0620: 6, Glu-101 to Gln-110, H0545; 5. H0024: 5. | Gln-112 to Gln-120, H0551: 5, L0659: 5, | Thr-128 to Asn-133, L0665: 5, H0012: 4, | Glu-135 to Gly-142, | Asp-145 to Cys-153, \$0126: 4, L0740: 4, | His-160 to Cys-166. L0754: 4, L0755: 4 |                     | . •                 |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 2963   | 2964   | 2965                 |   |   |   |                     |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 356 - 547  | 2 - 268  | 3 - 698              |   |   | •                                       |                     |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
|           | 788  | 789  | 790                  | _   |   |   |                     |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 1053548  | 1053585  | 1053725              | •   |   |   |                     |  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | HOFMUS0  | НЕ9МОЗ8  | HOPJF55              |   |   |   |                     |  |  |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| S0360: 1, S0046: 1, H0645: 1, H0645: 1, H0549: 1, H0592: 1, H0586: 1, H0013: 1, L0021: 1, H0013: 1, H0044: 1, H0544: 1, H0544: 1, H0544: 1, H0544: 1, H0544: 1, H0544: 1, H0615: 1, H0123: 1, H0615: 1, H0123: 1, H0613: 1, L0762: 1, L0764: 1, L0764: 1, L0662: 1, L0764: 1, L0806: 1, L0809: 1, L0789: 1, H0144: 1, H0684: 1, H0659: 1, S00190: 1, S00190: 1, S00190: 1, S00190: 1, L0780: 1, L0744: 1, L0780: 1, L0744: 1, L0780: 1, L0764: 1, L0780: 1, L0744: 1, L0780: 1, L0780: 1, L0744: 1, L0780: 1, L0780: 1, L0788: 1, L0780: 1, L0788: 1, L0780: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0788: 1, L0008: 1. | L0748: 22, L0751: 11,<br>L0754: 11, L0740: 9,<br>L0758: 9, H0659: 7,<br>L0362: 6, H0052: 5,<br>S0003: 5, L0769: 5,<br>H0651: 5, L0747: 4, |
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|                     |                     | <del></del>         |                     |                     | _            |                     |              |                     |                     | <u></u>             |                     |                     | _            |                     |                     | <del></del> .       |                     | _            |                     |                     |                |                     |                     |                     |                     | _                   |                     |                     |                |
| H0265: 3, H0657: 3, | H0402: 3, S0358: 3, | S0360: 3, H0150: 3, | H0012: 3, H0413: 3, | S0344: 3, H0529: 3, | 3, L0766: 3, | L0752: 3, H0686: 2, | 2, S0046: 2, | 10441: 2, L0622: 2, | H0013: 2, H0327: 2, | H0545: 2, H0606: 2, | .0455: 2, H0100: 2, | 70041: 2, H0509: 2, | 2, L0774: 2, | .0805: 2, L0659: 2, | H0691: 2, H0690: 2, | H0672: 2, H0521: 2, | S0044: 2, S3014: 2, | 2, S0032: 2, | L0749: 2, L0755: 2, | .0581: 2, L0594: 2, | : 2, S0446: 2, | H0352: 2, H0170: 1, | H0556: 1, S0040: 1, | 70049: 1, H0583: 1, | H0483: 1, H0661: 1, | S0418: 1, S0045: 1, | S0132: 1, H0351: 1, | H0333: 1, H0486: 1, | : 1, T0082: 1, |
| H0265:              | H0402:              | 20360:              | H0012:              | S0344:              | L0770:       | L0752:              | S0420:       | H0441:              | H0013:              | H0545:              | L0455:              | T0041:              | S0422:       | T0802:              | H0691:              | H0672:              | S0044:              | S0206:       | L0749:              | L0581:              | L990H          | H0352:              | H0556:              | T0049:              | H0483:              | S0418:              | S0132:              | H0333:              | H0101: 1,      |
|                     |                     |                     |                     |                     |              |                     |              |                     |                     |                     |                     |                     |              |                     |                     |                     |                     | :            |                     |                     |                |                     |                     | -                   |                     | _                   |                     |                     |                |
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|                     |                     |                     |                     |                     |              |                     |              | · · · ·             |                     |                     |                     |                     | _            |                     |                     |                     |                     |              |                     |                     |                |                     |                     |                     |                     | -                   |                     | -                   |                |

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|------------------|------------------|-----------------|------------------|------------------|--------------|------------------|----------------|------------|-----------------|----------|------------------|------------------|------------------|----------|-------------|----------|-------------|-----------|------|-------------|-------------------|-----------|----------|----------|--------------|------------------|----------|------------------|--------------------|
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  | •                |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             | -         |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  | •        |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
| 一                |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
| <u> </u>         | : I,             | . <b>1</b> ,    | 1,               | : 1,             | <del>-</del> | <u>-</u> ;       | . <del>.</del> | : T,       | 1,              | : 1,     | 1,               | : 1,             | ٦,               | T,       | 1,          | 1,       | <u>,</u>    | T,        | 1,   | 1,          | 1,                | ۲,        | 1,       | ī,       | <del>_</del> | 1,               | : 1,     | : 1,             | 1,                 |
| H0253: 1, S0010: | H0318: 1, H0581: | H0009: 1, H0123 | .0471: 1, H0014: | H0188: 1; H0328: | 023:         | H0031: 1, H0553: | 313            | , H0617: 1 | 673:            | 780      | F0067: 1, H0433: | H0412: 1, H0494: | 30448: 1, S0210: | L0371:   | L0637:      | L0772:   | L0645:      | L0771:    | 662: | L0650:      | T0806:            | L0655:    | 783:     | L0529: 1 | L0664:       | .0665: 1, H0689: | H0670:   | H0648: 1, H0539: | H0187: 1, S0028: 1 |
| S,               | , H0             | , HO            | , HO             | ; H0             | , T0         | , H0             | , HC           | , HC       | , H0            | HC,      | , H0             | , HC             | ,<br>S0,         | j,       | 2           | ,10      |             | 3,        | 3    | 3           | S,                | 3,        | j,       | i,       | S,           | , H0             | •        | l, HC            | l, S0              |
| 33:1             | 18: 1            | 99:1            | 11:1             | 88: 1            | 28: 1        | 31:1             | 4.             | H0181: 1,  | .0055: 1,       | H0361: 1 | 57: 1            | 12: 1            | <b>1</b> 8: 1    | .0763: 1 | L0639: 1, I | .0761: 1 | .0372: 1    | .0764: 1, | 21:1 | .0387: 1, I | 0375: 1,          | .0776: 1, | .0657: 1 | 0809: 1, | ,0666: 1,    | 55: 1            | H0435: 1 | 48: 1            | 87: 1              |
| H02              | H03              | ŬOĐ             | 54               | H018             | H04.         | H000             | <b>400</b>     | H013       | ,<br>100<br>100 | H03      | 1000             | H04              | S044             | EQ       | 1063        | 107      | L037        | 107       | 1052 | 1038        | 1037              | 1007      | 106      | 1080     | 1000         | 2007             | H04      | H06              | H01                |
|                  | -ii-             |                 |                  |                  |              | -/               |                |            |                 |          |                  | ,,               |                  |          |             | -        | <del></del> |           |      |             | ~ <del>````</del> |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  | '                |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  | •            |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
| Ĺ                |                  |                 |                  | •                |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
| -                |                  |                 |                  | _                |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  | •               |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                | ,          |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             | ٠                 |           |          |          |              | ·                |          |                  |                    |
|                  |                  |                 |                  |                  |              |                  |                |            |                 |          |                  |                  |                  |          |             |          |             |           |      |             |                   |           |          |          |              |                  |          |                  |                    |

|                     |                     |                     |                     |                     | ,  |                     |                     |                     |                     |                     | Ţ                   |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |  |
|---------------------|---------------------|---------------------|---------------------|---------------------|----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|--|
|                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 100690,             | 120180,             | 120180,             | 120180,             | 120180,             | 120190,             | 142989,             | 156232,             | 178600,             | 266100,             | 600258,             | 600321                                  |  |
|                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2q23-q31            | ı                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |  |
| L0743: 1, L0750: 1, | LU/3/: 1, LU/39: 1, | H0445: 1, S0242: 1, | S0196: 1, L0698: 1, | UNKWN: 1 and L0600: | -1 | L0776: 4, L0756: 4, | L0777: 4, L0749: 2, | H0052: 1, H0565: 1, | H0328: 1, L0770: 1, | L0769: 1, L0761: 1, | L0805: 1, L0659: 1, | L0809: 1, L0787: 1, | L0666: 1, L0665: 1, | L0439: 1, L0751: 1, | L0745: 1, L0747: 1, | L0779: 1 and L0758: 1. | L0438: 5, L0749: 4, | H0266: 3, H0038: 3, | L0803: 3, L0666: 3, | L0777: 3, L0763: 2, | H0547: 2, L0748: 2, | L0759: 2, S0031: 2, | $\blacksquare$      |                     | S0045: 1, S0132: 1, | S0222: 1, H0013: 1, | S0010: 1, H0390: 1, | H0052: 1, H0596: 1,                     | H0046: 1, H0564: 1,                    |
|                     |                     |                     | •                   |                     |    | Tyr-1 to Glu-8,     | Pro-51 to Thr-67,   | Val-85 to Ser-90,   | Pro-118 to Gly-128. | ,                   |                     |                     |                     |                     |                     |                        | Ser-19 to Gly-26,   | Glu-46 to Gln-52,   | Pro-61 to Ser-66,   | Arg-71 to Leu-85,   | Tyr-99 to Tyr-105,  | Pro-107 to Gly-115, | Leu-137 to Leu-147, | Glu-175 to Leu-181, | Ala-187 to Ser-196, |                     | Ser-353 to Lys-367, | Gly-388 to Ser-397, H0052: 1, H0596: 1, | Thr 415 to Val 423, H0046: 1, H0564: 1 |
|                     |                     |                     |                     |                     |    | 2967                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2968                |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |   |  |
|                     |                     |                     |                     |                     |    | 643 - 149           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1 - 2355            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |  |
|                     |                     |                     |                     |                     |    | 792                 |                     |                     |                     |                     | (                   |                     |                     |                     |                     |                        | 262                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |  |
|                     |                     |                     |                     |                     | ,  | 1053772             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1053973             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |  |
|                     |                     |                     |                     |                     |    | HODCJ32             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HOCPT34             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |  |

|  |  |                     |                     |                     |                     |                     |                     |                     |                     |                        | 107741,             | 113900,             | 122720,             | 122720,             | 126340,                                 | 126391,             | 134790,             | 160900,             | 164731,                                 | 173850,             | 191044,             | 207750,             | 248600,             | 258501,             | 600040,             | 600138              |
|--|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |  |                     |                     |                     |                     |                     |                     |                     | -11                 |                        | 19q13.2-            | q13.4               |                     | ·                   |   |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |
| N0007: 1, H0201: 1,<br>H0616: 1, H0551: 1,<br>T0042: 1, H0561: 1,                                      | H0131: 1, H0529: 1,<br>L0761: 1, L0641: 1, | L0774: 1, L0776: 1, | L0659: 1, L0665: 1, | H0520: 1, H0519: 1, | H0593: 1, S0126: 1, | H0660: 1, H0539: 1, | H0579: 1, L0743: 1, | L0439: 1, L0745: 1, | L0747: 1, L0750: 1, | S0260: 1 and L0366: 1. | L0601: 7, H0521: 6, | S0418: 4, H0617: 4, | L0665: 4, S0046: 3, | H0620: 3, H0551: 3, | H0413: 3, L0659: 3,                     | H0672: 3, H0522: 3, | L0758: 3, H0250: 2, | H0012: 2, H0428: 2, | H0622: 2, H0628: 2,                     | H0181: 2, S0422: 2, | L0794: 2, L0526: 2, | L0518: 2, H0547: 2, | H0684: 2, H0539: 2, | L0602: 2, L0743: 2, | L0439: 2, L0751: 2, | L0749: 2, L0604: 2, |
| Glu-459 to Cys-469, N0007: 1, H0201: 1<br>Gly-471 to Pro-481. H0616: 1, H0551: 1<br>T0042: 1, H0561: 1 |  |                     |                     | •                   |                     |                     |                     |                     |                     |                        | Gly-6 to His-16,    | Arg-20 to Gly-41,   | Arg-115 to Asn-121, | Phe-136 to Glu-144, | Lys-152 to Glu-162, H0413: 3, L0659: 3, | Glu-176 to Thr-182, | Pro-205 to Gln-212, | Lys-229 to Ala-235, | Gly-310 to Trp-315, H0622: 2, H0628: 2, | Val-328 to Thr-342. |                     |                     |                     |                     |                     |                     |
|  |  |                     |                     |                     |                     |                     |                     |                     |                     |                        | 5965                |                     |                     |                     |   |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |
|  | :  |                     |                     |                     |                     | •                   |                     |                     |                     |                        | 1928 - 363          |                     |                     |                     |   |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |
|  |  |                     |                     |                     |                     |                     |                     |                     |                     |                        | 794                 |                     |                     |                     |   |                     |                     |                     |   |                     | _                   |                     |                     |                     |                     |                     |
|  |  | :                   |                     | -                   | ,                   |                     | -                   |                     |                     |                        | 1054015             |                     |                     |                     |   |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |
|  |  |                     |                     |                     |                     |                     |                     |                     |                     |                        | HFKHC64             |                     |                     |                     |   | ,                   |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |

|                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                       |                     |                     |                     |
|--------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|
|                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                       | 5                   | ,                   |                     |
| I 0603: 2 H0206: 1 | LUUUS. 2, 110233. 1, | S0212: 1, H0638: 1, | S0356: 1, S0376: 1, | S0360: 1, H0370: 1, | H0587: 1, H0333: 1, | H0486: 1, H0427: 1, | H0156: 1, L0021: 1, | H0618: 1, H0253: 1, | H0052: 1, H0563: 1, | H0023: 1, H0266: 1, | S0022: 1, H0039: 1, | T0006: 1, H0424: 1, | H0135: 1, H0264: 1, | H0623: 1, H0509: 1, | H0647: 1, L0520: 1, | L0375: 1, L0654: 1, | L0783: 1, L0809: 1, | L0789: 1, L0666: 1, | L0663: 1, S0374: 1, | H0593: 1, S0126: 1, | H0690: 1, S0328: 1, | S0152: 1, S0146: 1, | H0555: 1, L0779: 1, | L0752: 1, L0731: 1, | L0759: 1, L0592: 1, | S0011: 1, H0665: 1, | H0667: 1 and S0042: 1 | H0124: 6, L0769: 3, | L0768: 3, L0794: 3, | L0522: 3, L0666: 3, |
|                    |                      | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       | Arg-22 to Met-33,   | Ile-38 to Ala-49,   | Val-64 to Pro-85,   |
|                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       | 2970                |                     |                     |
|                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       | 2117 -              | 1056                | -                   |
|                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       | 795                 |                     |                     |
|                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                       | 1054085             |                     |                     |
|                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                       | HOPKO37             |                     |                     |

|   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                        |                     |                     |                     |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|
|   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                        |                     |                     |                     |
| S0420: 2, H0599: 2,                     | H0620: 2, H0617: 2, | H0412: 2, H0100: 2, | H0646: 2, H0520: 2, | H0684: 2, L0588: 2, | L0778: 1, H0484: 1, | H0661: 1, S0360: 1, | H0586: 1, H0427: 1, | H0253: 1, H0581: 1, | H0546: 1, H0009: 1, | N0006: 1, H0172: 1, | H0012: 1, H0188: 1, | H0181: 1, H0606: 1, | H0040: 1, H0059: 1, | H0561: 1, S0002: 1, | L0503: 1, L0640: 1, | L0803: 1, L0652: 1, | L0654: 1, L0790: 1, | L0664: 1, L0565: 1, | H0682: 1, H0658: 1, | H0670: 1, H0660: 1, | H0539: 1, L0744: 1, | L0439: 1, L0754: 1, | L0747: 1, L0750: 1, | L0777: 1, L0731: 1, | S0260: 1, L0593: 1, | H0506: 1 and H0352: 1. | L0794: 5, H0542: 5, | S0358: 3, H0013: 2, | H0618: 2, H0617: 2, |
| Pro-105 to Ala-123. S0420: 2, H0599: 2, |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                        | His-4 to Tyr-10,    | Ile-58 to Leu-63,   | Pro-65 to Val-74,   |
|   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                        | 2971                |                     |                     |
|   | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2 - 2332            |                     |                     |
|   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 962                 |                     |                     |
|   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1054122             |                     |                     |
|   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HNBVO53             |                     |                     |

|  |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|
| Leu-122 to Ser-132, L0769: 2, L0764: 2,<br>Gln-134 to Leu-144, L0662: 2, L0803: 2,<br>Pro 155 to Ser-166, L0670: 2, 10756: 2 | L0595: 2, L0361: 2, | H0556: 1, S0040: 1, | L0785: 1, H0341: 1, | H0661: 1, H0662: 1, | H0402: 1, S0420: 1, | H0370: 1, T0040: 1, | T0114: 1, H0253: 1, | H0581: 1, H0041: 1, | H0687: 1, H0604: 1, | H0213: 1, H0644: 1, | H0181: 1, H0087: 1, | H0412: 1, H0413: 1, | H0100: 1, S0382: 1, | H0509: 1, S0210: 1, | L0763: 1, L0761: 1, | L0372: 1, L0641: 1, | L0649: 1, L0386: 1, | L0809: 1, L0789: 1, | L0663: 1, H0693: 1, | H0658: 1, H0672: 1, | H0539: 1, S0027: 1, | L0757: 1, L0758: 1, | L0604: 1, H0543: 1, | H0506: 1 and H0352: 1. | L0766: 5, L0804: 3, | L0105: 2, L0803: 2, | L0788: 2, H0659: 2, |
| Leu-122 to Ser-132,<br>Gln-134 to Leu-144,   | F10-155 to 561-100. | ٠.                  |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Ser-11 to Cys-17,   | Glu-39 to Tyr-49,   | Glu-98 to Glu-104,  |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2972                |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                      | 395 - 1168          |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 797                 |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                        | 1054155             |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                        | HOPKF84             |                     |                     |

|   |                     |   |   |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 113721,              | 247200,             | 600029,             | 601545              |                     |                     |                     |                     |                     |                     |                        |           |                     |
|---|---------------------|---|---|----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|
|   |                     |   |   | ,                          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 17p13.3              |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                        |           |                     |
| Gly-122 to Ser-128, L0759: 2, H0624: 1, | H0657: 1, H0661: 1, | Glu-170 to Thr-195, H0601: 1; H0266: 1, | Leu-213 to Gly-218, H0687: 1, H0032: 1, | , H0413: 1, S0450: 1,      |                     | L0638: 1, L0761: 1, | L0662: 1, L0650: 1, | L0805: 1, L0659: 1, | L0666: 1, L0664: 1, | L0665: 1, S0052: 1, | H0547: 1, H0684: 1, | L0745: 1, L0747: 1, | L0750: 1, L0731: 1, | L0758: 1, H0595: 1, | S0026: 1, H0543: 1, | S0424: 1 and S0456: 1. | H0594: 11, H0596: 8, | S0282: 5, S0260: 5, | S0194: 5, H0543: 5, | S0278: 2, H0600: 2, | H0592: 2, H0598: 2, | S0344: 2, H0595: 2, | S0356: 1, H0438: 1, | H0574: 1, H0599: 1, | S0346: 1, H0318: 1, | H0597: 1, S0388: 1, | H0316: 1, S0390: 1 and | H0542: 1. | H0124: 2, H0618: 1, |
| Gly-122 to Ser-128,                     | Tyr-154 to Val-163, | Glu-170 to Thr-195,                     | Leu-213 to Gly-218                      | Lys-229 to Phe-236, H0413: | Ser-241 to Ser-248. |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                        |                      | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Ala-23 to Gly-49,   |
|   |                     |   |   |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2973                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2974                |
|   |                     | ٠.                                      |   |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 109 - 174            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1 - 873             |
|   |                     |   |   |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 862                  |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                        |           | 799                 |
|   |                     |   |   |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1054196              |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                        |           | 1054230             |
|   |                     |   |   |                            |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                        | HCQDQ11              | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HTFML39             |

|   |                                       |                 |           |                     |                     |          |                     |                     |                     |                     | _                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---|---------------------------------------|-----------------|-----------|---------------------|---------------------|----------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   |                                       | 118485,         | 151670,   | 231680,             | 272800,             | 272800,  | 272800,             | 276700,             | 600374,             | 601780              | <u>.</u>             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ·   |                                       | 15q23-q25       |           |                     |                     |          |                     | ·                   |                     |                     |                      | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Ser-106 to Pro-115, H0123: 1, H0012: 1, Gly-160 to Lys-167, H0083: 1, H0428: 1, Thr-183 to Gly-189, H0593: 1, L0740: 1 and Glu-196 to Gly-211, S0424: 1. Ala-218 to Gly-224, Val-257 to Leu-269.          | H0435: 2                              | l               | 6, AR053: | AR039: 4, AR060: 3, | AR033: 1, AR061: 1, | AR055: 0 | L0777: 9, H0556: 8, | H0620: 7, L0766: 7, | H0521: 7, L0747: 6, | S0360: 5, H0250: 5, | 0751: 5, L0794: 4,   | .0754; 4, L0591: 4, | S0354: 3, S0358: 3, | S0278: 3, H0553: 3, | S0144: 3, L0769: 3, | .0773: 3, H0547: 3, | S0404: 3, S3014: 3, | .0743: 3, L0744: 3, | .0439: 3, L0752: 3, | .0731: 3, H0445: 3, | S0218: 2, H0580: 2, | S0132: 2, H0393: 2, | H0550: 2, S0222: 2, |
| Ser-106 to Pro-115, H0123: 1, H0012: 1<br>Gly-160 to Lys-167, H0083: 1, H0428: 1<br>Thr-183 to Gly-189, H0593: 1, L0740: 1<br>Glu-196 to Gly-211, S0424: 1.<br>Ala-218 to Gly-224,<br>Val-257 to Leu-269. | Pro-3 to Lys-13,<br>Thr-39 to Ile-45. | Glu-2 to Thr-7, |           |                     |                     |          | Ser-152 to Gly-158, |                     | <u> </u>            | S                   | <u>, <del></del></u> | <u>H</u>            | S                   |                     | <u>.</u>            | 1                   | S                   |                     | 1                   | <u> </u>            |                     | <u></u>             | <u> </u>            |
|   | 2975                                  | 2976            |           |                     |                     | -        |                     | ·                   |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| :   | 3 - 137                               | 1158 - 241      |           |                     |                     |          |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 008                                   | 801             |           |                     |                     |          |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 1054235                               | 1054288         |           |                     |                     |          |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | HOGCR32                               | HFCDL60         |           |                     |                     |          |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     | `                   |                     |                     |                     |                     |                     |

|  | ·                                    |  |
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|  | î <del></del> î                      | ; <del></del> ;                        |
| H0486: 2, H0635: 2, H0575: 2, H0575: 2, H0590: 2, H0485: 2, H0590: 2, H0487: 2, H0309: 2, H0050: 2, H0050: 2, H0056: 2, H0264: 2, H0156: 2, H0264: 2, H0156: 2, H0264: 2, L0761: 2, L0771: 2, L0768: 2, L0649: 2, L0568: 2, L0649: 2, L0568: 2, L0498: 2, L0568: 2, L0748: 2, L0568: 2, L0748: 2, L0593: 2, L0748: 2, L0593: 2, L0593: 2, L0593: 2, H0543: 2, H0543: 2, H0543: 1, H0656: 1, H0341: 1, H0656: 1, H0341: 1, H0656: 1, H0589: 1, H0589: 1, H0576: | 045:<br>370:                         | H0392: 1, H0592:<br>H0587: 1, T0040: 1 |
| 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,  | 1, S0<br>1, H0                       | 1, HC<br>1, T0                         |
| H0486: 2, H0635:<br>H0575: 2, H0590:<br>H0457: 2, H0309:<br>H0457: 2, H0150:<br>H0266: 2, H0264:<br>L0761: 2, L0771:<br>L0761: 2, L0771:<br>L0768: 2, L0649:<br>L0768: 2, L0649:<br>L0568: 2, L0771:<br>L0566: 2, H0144:<br>L0566: 2, H0144:<br>L0565: 2, L0789:<br>S0027: 2, L0789:<br>S0027: 2, L0788:<br>S0434: 2, L0581:<br>L0593: 2, L0595:<br>H0542: 2, H0543:<br>H0717: 1, H0657:<br>H0656: 1, H0341:<br>H0483: 1, H0555:<br>H0305: 1, H0576:   | H0208: 1, S0045:<br>S0046: 1, H0370: | H0392: 1,<br>H0587: 1,                 |
| <u>                                    </u>  | H S                                  | HH                                     |
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| ): 1, H0156: 1, | H0706: 1, H0318: 1, | H0310: 1, H0231: 1, | H0545: 1, H0009: 1, | HO565: 1, H0123: 1, | H0012: 1, H0047: 1, | H0197: 1, H0024: 1, | 7: 1, T0010: 1, | H0267: 1, H0252: 1, | H0688: 1, H0617: 1, | S0364: 1, H0124: 1, | S0036: 1, H0040: 1, | 10488: 1, H0412: 1, | H0059: 1, H0100: 1, | H0494: 1, H0560: 1, | S0448: 1, S0440: 1, | H0131: 1, H0130: 1, | H0633: 1, H0647: 1, | S0344: 1, L0770: 1, | .0643: 1, L0645: 1, | .0764: 1, L0521: 1, | .0364: 1, L0381: 1, | L0774: 1, L0775: 1, | 6: 1, L0653: 1, | .0776: 1, L0659: 1, | .0809: 1, L0663: 1, | .0664: 1, H0699: 1, | S0374: 1, H0435: 1, | H0648: 1, S0152: 1, | S0044: 1, H0134: 1, |
| S0280: 1        | H070                | H031                | H054                | )H056               | H001                | H019                | H005            | H026                | H068                | 8036                | 8003                | H048                | H005                | H049                | S044                | H013                | H063                | 8034                | 1064                | )T01                | 1036                | 1.077               | 1080            | 17077               | 17080               | 9907                | S037                | H064                | S004                |
|                 |                     | · <u> </u>          |                     |                     |                     |                     |                 |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                 |                     |                     |                     |                     |                     |                     |
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|                 |                     |                     |                     |                     |                     | -                   | -               | _                   |                     |                     |                     |                     | _                   |                     | -                   |                     | -                   |                     | -                   |                     |                     |                     |                 | _                   |                     |                     |                     |                     |                     |

|  |   |                                       |                     |                        | 157900,              | 600185,             | 600185,             | 600631              |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |
|--|---|---------------------------------------|---------------------|------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| ·  |   |                                       |                     | ,                      | 13q12.3-             | q13.1               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| S0406: 1, S0032: 1,<br>L0749: 1, L0756: 1,<br>L0779: 1, L0759: 1,<br>S0260: 1, H0665: 1, | H0136: 1, H0423: 1,<br>S0424: 1 and H0506: 1. | H0208: 2, H0615: 2, S0001: 1 H0351: 1 | H0545: 1, H0081: 1, | H0424: 1 and H0334: 1. | L0749: 15, L0748: 9, | L0758: 9, L0766: 8, | L0770: 7, H0266: 6, | L0775: 6, L0655: 6, | L0731: 6, L0362: 6, | S0444: 5, L0764: 5, | L0809: 5, S0358: 4, | H0637: 4, L0777: 4, | L0752: 4, H0305: 3, | S0440: 3, L0646: 3, | L0773: 3, S0406: 3, | L0439: 3, L0740: 3, | L0754: 3, L0755: 3, | L0759: 3, H0341: 2, | S0420: 2, S0356: 2, | S0360: 2, S6028: 2, | H0551: 2, S0438: 2, | L0761: 2, L0373: 2, | L0800: 2, L0768: 2, | L0774: 2, L0666: 2, |
|  |   |                                       |                     |                        |                      |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |   | 2977                                  |                     |                        | 2978                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |
|  |   | 088 - 6651                            |                     | .                      | 689 - 138            | ,                   |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |   | 802                                   |                     |                        | 803                  |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | •   | 1054400                               |                     |                        | 1054451              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |   | HODEC13                               |                     |                        | HUSYA18              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | 1.0                 |                     |                     |                     |                     |                     |                     |                     |                     |

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| L0665: 2, S0378: 2, | S0380: 2, L0750: 2, | .0592: 2, H0423: 2, | H0624: 1, H0685: 1, | H0664: 1, S0418: 1, | S0476: 1, H0393: 1, | H0351: 1, S0222: 1, | : 1, L0623: 1, | H0486: 1, H0156: 1, | 1, H0036: 1, | S0010: 1, H0318: 1, | H0309: 1, H0569: 1, | S0003: 1, L0055: 1, | H0673: 1, S0036: 1, | : 1, H0413: 1, | 1, L0351: 1, | F0041: 1, H0494: 1, | : 1, L0369: 1, | 1, L0763: 1, | 1, L0772: 1, | 1, L0645: 1, | 1, L0767: 1, | 1, L0794: 1, | 1, L0375: 1, | 1, L0378: 1, | 1, L0653: 1, | 4669: 1, L0659: 1, | 1, L5286: 1, | .0663: 1, L0664: 1, | 1, H0689: 1, |
| T0665:              | S0380:              | 1.0592              | H0624               | H0664               | S0476:              | H0351               | H0574          | H0486               | T0082:       | S0010:              | H0309               | 80003               | H0673               | H0412          | S0038:       | T0041:              | H0714: 1, ]    | L0520: 1     | L0769: 1     | L0372: 1     | L0521: 1, I  | L0364: 1     | L0649: 1     | L0651:       | L0805: 1     | 1,4669             | L0792: 1     | T0663               | S0374:       |
|                     |                     |                     |                     |                     |                     |                     |                | s <u>s</u> .        | ٠            |                     |                     |                     |                     |                |              |                     |                |              |              |              |              |              |              | _            |              |                    |              |                     |              |
|                     |                     |                     |                     | •                   |                     | _                   |                |                     |              |                     |                     |                     |                     |                |              |                     |                |              |              | _            |              |              |              | <del>,</del> |              |                    |              |                     |              |
|                     |                     | _                   |                     |                     |                     |                     | <u>.</u>       |                     | <u>-</u>     |                     |                     |                     |                     |                |              |                     |                |              |              |              |              |              |              | _            |              | -                  |              | - <b>-</b>          |              |
|                     | ·                   |                     | -                   | -,-,                |                     |                     |                |                     | •.           |                     |                     |                     |                     |                |              |                     | <del>-</del>   |              | ,            |              |              |              |              |              |              |                    |              |                     | -            |

| H0682: 1, H0684: 1,<br>H0659: 1, H0670: 1,<br>H0660: 1, H0648: 1,<br>H0710: 1, H0521: 1,<br>S0013: 1, H0696: 1,<br>H0436: 1, S0028: 1,<br>L0747: 1, L0786: 1,<br>S0436: 1, L0591: 1,<br>H0543: 1, H0422: 1 and<br>S0424: 1. | S0250: 5, L0764: 4,<br>H0457: 3, L0789: 3,<br>H0543: 3, H0650: 2,<br>L0717: 2, H0594: 2,<br>L0800: 2, L0769: 2,<br>L0800: 2, L0794: 2,<br>H0670: 2, H0521: 2,<br>H0445: 2, H0136: 2,<br>H0542: 2, H0556: 1,<br>H0484: 1, H0255: 1,<br>S0354: 1, S0358: 1,<br>S0360: 1, H0550: 1,<br>H0081: 1, H0012: 1,<br>H0620: 1, H0266: 1,<br>H0653: 1, S0364: 1,<br>H0663: 1, H0488: 1, | H0412: 1, H0059: 1, |
|---|--|---------------------|
|   | Glu-16 to Gly-33,<br>Lys-63 to Lys-71,<br>Asp-77 to Pro-82.  |                     |
|   | 2979   |                     |
| ÷   | 1755   |                     |
|   | 808  |                     |
|   | 1054527  |                     |
|   | HOCON42  |                     |

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|                     |                     |                     |                     |                     | ••                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     |                     |                     |                     | <del>-</del>        |                     |                     |                     | <del> :</del>       |                     |                     |
| H0494: 1, H0561: 1, | H0509: 1, S0144: 1, | S0344: 1, S0210: 1, | S0002: 1, L0770: 1, | L0667: 1, L0772: 1, | L0771: 1, L0662: 1, | L0803: 1, L0774: 1, | L0806: 1, L0655: 1, | L0659: 1, L0636: 1, | L0783: 1, L0663: 1, | L0664: 1, L0665: 1, | H0519: 1, H0689: 1, | H0684: 1, H0658: 1, | H0660: 1, L0602: 1, | H0436: 1, L0779: 1, | S0031: 1, L0595: 1 and | S0424: 1. | L0777: 5, L0748: 4, | S0007: 2, L0764: 2, | L0809: 2, L0750: 2, | L0759: 2, H0669: 1, | H0730: 1, H0431: 1, | L0022: 1, H0581: 1, | H0057: 1, H0271: 1, | H0428: 1, L0768: 1, | L0794: 1, L0766: 1, | L0803: 1, L0805: 1, | L0655: 1, L0657: 1, | L0518: 1, L0783: 1, | L0666: 1, L0665: 1, |
|                     | <u> </u>            |                     | <u> </u>            | ,                   |                     | 7                   |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                        |           | Ser-24 to Thr-31,   | Pro-164 to Asn-173, | Val-185 to Arg-192, |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2980                |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |
|                     | _                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 22 - 1206           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | ,                   | _                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                        |           | 805                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1054550             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HKMNH37             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| .0743: 1, L0740: 1,<br>.0751: 1, L0747: 1,<br>.0756: 1, H0445: 1,<br>.0599: 1, H0423: 1, | L0659: 10, L0439: 5,<br>L0378: 4, L0748: 4,<br>L0777: 4, H0657: 3,<br>L0662: 3, L0655: 3,<br>L0665: 3, S0428: 3,<br>H0618: 2, S0474: 2,<br>S0049: 2, H0412: 2,<br>S0049: 2, H0412: 2,<br>L0646: 2, L0771: 2,<br>L0664: 2, L0657: 2,<br>L0664: 2, L0657: 2,<br>L0665: 1, L0657: 2,<br>L0665: 1, H0662: 1,<br>S0027: 2, L0698: 2,<br>H0556: 1, H0662: 1,<br>S0444: 1, H0208: 1,<br>S0418: 1, S0476: 1,<br>H0619: 1, H0351: 1,<br>S0220: 1, H0455: 1,<br>H0427: 1, S0280: 1, |
|--|---|
|  | Lys-26 to Glu-41, Lys-149 to Ala-156, Ld Arg-214 to Lys-225, Ld Ile-229 to Lys-235, Ld Ile-229 to His-245. Hi Hi Hi Hi Hi Hi Hi Hi Hi Hi Hi Hi Hi   |
|  | 2981  |
|  | 63 - 797  |
|  | 908   |
|  | 1054662   |
|  | HPDWP21   |

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|                     |                     |                     | <del>'</del>        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                        |                   |
| H0706: 1, T0071: 1, | H0544: 1, H0546: 1, | H0545: 1, N0006: 1, | H0123: 1, H0057: 1, | S0051: 1, H0188: 1, | H0031: 1, L0055: 1, | H0673: 1, H0708: 1, | H0163: 1, H0090: 1, | H0634: 1, H0087: 1, | H0623: 1, H0059: 1, | S0386: 1, H0633: 1, | H0538: 1, H0695: 1, | L0763: 1, L0769: 1, | L0638: 1, L0639: 1, | L5565: 1, L0667: 1, | L0764: 1, L0650: 1, | L0775: 1, L0375: 1, | L0807: 1, L0542: 1, | L0384: 1, L0666: 1, | H0144: 1, H0519: 1, | S0008: 1, H0660: 1, | H0518: 1, H0521: 1, | S0044: 1, H0436: 1, | S0037: 1, S3014: 1, | L0744: 1, L0740: 1, | L0731: 1, L0757: 1, | L0758: 1, S0031: 1, | H0445: 1, S0194: 1, | H0423: 1 and H0721: 1. | AR096: 52, AR039: |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Met-31 to Arg-37, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2982              |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                        | 21 - 1388         |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 807               |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1054677           |
| -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | - 11                |                     |                     |                     |                     |                     |                     |                     | 1                      | HOGCS52           |

|   |                        |  |                                |                     |   | •                   |                     | <del>- 11.</del>   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---|------------------------|--|--------------------------------|---------------------|---|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   |                        |  |                                |                     |   |                     |                     |                    |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 9, AR089: 49, AR053:                      | 3, AR060: 33, AR061:   | Leu-229 to Asp-234,20, AR055: 19, AR104: | 8, AR033: 17                   | L0751: 8, L0754: 8, | 0769: 6, L0803: 6,                      | .0748: 6, H0100: 5, | H0435: 5, L0439: 5, | 0758: 5, L0665: 4, | .0747: 4, L0749: 4, | S0114: 3, H0619: 3, | H0546: 3, H0457: 3, | S0002: 3, L0637: 3, | .0657: 3, H0658: 3, | .0743: 3, L0777: 3, | .0780: 3, H0445: 3, | S0040: 2, H0255: 2, | H0645: 2, S0278: 2, | H0024: 2, H0416: 2, | H0030: 2, H0553: 2, | H0135: 2, H0649: 2, | .0770: 2, L0804: 2, | .0774: 2, L0805: 2, | .0659: 2, H0659: 2, | H0518: 2, H0555: 2, | J0755: 2, L0757: 2, | .0599: 2, L0603: 2, | H0423: 2, H0265: 1, | H0556: 1, L0460: 1, | H0295: 1, S0218: 1, |
| Thr-157 to Arg-176, 49, AR089: 49, AR053: | Gly-183 to Tyr-188, 43 | Leu-229 to Asp-234,20                    | Leu-275 to Lys-280, 18, AR033: | Thr-381 to Asn-386, | Asp-424 to Arg-434. L0769: 6, L0803: 6, |                     | H                   |                    |                     | S                   | <u>田</u>            | <u> </u>            | <u> </u>            | ב                   | <u> </u>            | S                   | <u> </u>            | <u> </u>            | <u>H</u>            | <u> </u>            | <u> </u>            | <u>.</u>            |                     | <u>E</u>            | <u>.</u>            | <u> </u>            | <u>E</u> .          | <u> </u>            | <u> </u>            |
|   |                        |  |                                |                     | _                                       |                     | •                   |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u> </u>            |                     | •                   | •                   |                     |
|   | ,                      |  |                                |                     |   |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                        |  |                                |                     | <del></del>                             |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|   |                        |  |                                |                     |   |                     |                     |                    |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|   |   | · · · · · · · · · · · · · · · · · · ·                             | ····· |  | <br> |          |   | -   |  | _                   |
|   |   |   |       |  |      |          |   |   |  |                     |
| H0583: 1, H0650: 1,<br>S0212: 1, H0483: 1,<br>H0402: 1, H0125: 1,<br>S0418: 1, S0420: 1,<br>S0356: 1, S0360: 1, | S0046: 1, L0717: 1,<br>H0261: 1, H0370: 1,<br>H0391: 1, H0438: 1, | H0486: 1, T0039: 1,<br>H0250: 1, H0156: 1,<br>L0021: 1, H0575: 1, |       | HOSSI: 1, SOC495: 1,<br>HOOS2: 1, HO235: 1,<br>HO150: 1. LO471: 1, |      |          |   | H0181: 1, H0017: 1,<br>L0455: 1, H0708: 1,<br>H0163: 1 H0591: 1 | H0551: 1, H0488: 1,<br>H0646: 1, S0344: 1, | L0762: 1, L0640: 1, |
|   | <u> </u>  |   |       |  |      |          |   |   |  |                     |
|   |   |   |       |  |      | <u>.</u> |   | _   |  |                     |
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|   |   |   |       |  |      | •        |   |   |  |                     |
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|                     | <br><del></del>     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     | •                   | •                   |                     |                     |                     |                     | •                   |                     |                     |                     | •                      | ,         |                       |
| L0638: 1. L0761: 1. | L0764: 1, L0771: 1, | L0648: 1, L0521: 1, | L0662: 1, L0768: 1, | L0794: 1, L0649: 1, | L0386: 1, L0381: 1, | L0775: 1, L0375: 1, | L0378: 1, L0806: 1, | L0653: 1, L0776: 1, | L0655: 1, L0606: 1, | L0518: 1, L0809: 1, | • | L0666: 1, L0664: 1, | S0052: 1, S0374: 1, | L0438: 1, H0547: 1, | H0593: 1, H0690: 1, | H0682: 1, H0670: 1, | H0660: 1, H0666: 1, | S0330: 1, S0152: 1, | H0696: 1, H0436: 1, | L0745: 1, L0750: 1, | L0779: 1, S0260: 1, | S0434: 1, L0605: 1, | L0595: 1, L0361: 1, | H0653: 1, S0192: 1, | S0194: 1, S0276: 1, | H0422: 1, H0008: 1 and | H0352: 1. | H0694: 23, L0777: 11, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Ser-46 to Ala-56,     |
|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |   | ÷                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2983                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                        |           | 3 - 485               |
|                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 808                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     | _                   |                     |                        |           | 1054751               |
|                     |                     |                     |                     |                     |                     |                     |                     | ···                 |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HWMCK60               |

|  | <u> </u>                                   |                     |  |                     |                    |                    |                     |                     |                     |                    |                   |                     |                     |                     |                  | •                |                  |                  |                    |                  |                  | <u>.</u>         |                  |                  |                  |
|--|--|---------------------|--|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|--------------------|-------------------|---------------------|---------------------|---------------------|------------------|------------------|------------------|------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|  |  | _                   |  |                     | <del></del>        |                    |                     | ,                   |                     |                    | <del></del>       |                     |                     |                     |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |                  |
| 5: 9,<br>: 7,<br>: 5.  | . 5. 5.<br>4. 5.                           | 4,                  | 4, 4                                       | .3,                 | .3,                | . 3,               | 3: 3,               | 8: 2,               | . 2,                | .2,                | . 2,              | 2. 2,               | .,2,                | .; 2,               | 4: 1,            | 2: 1,            | 3: 1,            | 5: 1,            | 1: 1,              | 3: 1,            | : 1,             | :1,              | l: 1,            | 7: 1,            | 6: 1,            |
| L0747: 10, L0005: 9,<br>L0755: 8, L0754: 7,<br>L0731: 6, L0776: 5. | L0758: 5, L0759: 5,<br>H0141: 4, H0585: 4, | S0360: 4, L0770: 4, | .0771: 4, L0775: 4,<br>30374: 4, L0756: 4. | .0763: 3, L0764: 3, | 0766: 3, L0806: 3, | 0751: 3, L0749: 3, | 10668: 3, H0543: 3, | H0295: 2, H0638: 2, | 30222: 2, S0210: 2, | 0662: 2, L0774: 2, | .0783: 2, L.0792: | H0144: 2, S0152: 2, | 30406: 2, L0748: 2, | .0750: 2, L0757: 2, | 10542: 2, H0624: | H0171: 1, T0002: | H0294: 1, S0218: | S0430: 1, H0656: | H0341: 1, H0661: 1 | H0228: 1, S0348: | S0376: 1, S0444: | S0408: 1, S0045: | S0278: 1, H0431: | H0586: 1, H0587: | H0497: 1, H0486: |
|  |  | SO.                 |  | <u>a</u>            | <u>21</u>          | <u> </u>           | HO<br>HO            | <u> </u>            | SO:                 | <u> </u>           | <u>F</u>          | OH HO               | SO.                 | <u>2</u>            | OH<br>HO         | OH<br>H          | OH!              | SO'S             | OH.                | OH<br>H          | SO:              | 20               | 80               | HO               | OH<br>H          |
| Asp-85 to Ala-116,<br>Gln-132 to Lys-140,<br>Phe-143 to Leu-152,   |  |                     |  |                     |                    |                    |                     |                     |                     |                    |                   |                     |                     |                     |                  |                  |                  |                  |                    |                  |                  |                  |                  |                  |                  |
|  |  |                     |  |                     |                    |                    |                     |                     |                     |                    |                   |                     |                     |                     |                  |                  |                  |                  |                    |                  | •                |                  | <del></del>      |                  |                  |
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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---|---------------------|---------------------|
|                     | <del></del>         |                     |                     |                     |                     |                     |                     |   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |   |                     |                     |
| H0599: 1, H0196: 1, | F0110: 1, H0327: 1, | H0083: 1, H0375: 1, | H0594: 1, H0188: 1, | H0687: 1, S0003: 1, | H0252: 1, H0428: 1, | H0031: 1, H0553: 1, | H0400: 1, H0591: 1, | F0067: 1, H0264: 1,                           | H0059: 1, S0386: 1, | F0041: 1, H0494: 1, | H0625: 1, S0438: 1, | H0641: 1, H0646: 1, | S0144: 1, S0344: 1, | L0520: 1, L0769: 1, | L0638: 1, L0761: 1, | L0373: 1; L0768: 1, | L0383: 1, L0666: 1, | L0664: 1, H0547: 1, | H0670: 1, S0328: 1, | S0146: 1, H0436: 1, | S3012: 1, L0744: 1, | L0740: 1, L0752: 1, | L0753: 1, H0445: 1, | H0653: 1 and H0667: 1. | AR096: 3, AR052: 2, |   | AR061: 1, AR033: 1, | AR053: 1, AR055: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     | <u>, , , , , , , , , , , , , , , , , , , </u> |                     | ··•                 |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                        |                     |   | 3-                  |                     |
|                     |                     |                     | ,                   |                     |                     |                     | •                   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 2984                |   |                     |                     |
|                     |                     |                     | •                   | •                   |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 3 - 401             |   |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 608                 |   |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1054790             |   |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HWLOU33             | · |                     |                     |

| AR039: 0, AR104: 0<br>S0444: 5, S0360: 4,<br>S0408: 3, H0625: 3,<br>H0436: 3, S0358: 2,<br>H0641: 2, L0803: 2,<br>S0374: 2, H0656: 1,<br>H0662: 1, S0420: 1,<br>S0442: 1, S0354: 1,<br>S0476: 1, H0392: 1,<br>H0427: 1, H0457: 1,<br>H0672: 1, S0378: 1,<br>S0192: 1, H0423: 1 and<br>H0672: 1, S0378: 1, | L0748: 19, S0372: 12,<br>L0747: 12, L0750: 9,<br>S0408: 7, L0752: 7,<br>L0731: 7, L0758: 7,<br>H0031: 6, L0439: 6,<br>L0740: 6, L0769: 5,<br>L0757: 5, L0471: 4,<br>L0065: 4, H0672: 4,<br>H0543: 4, H0341: 3,<br>H0543: 3, L0771: 3,<br>L0803: 3, L0771: 3,<br>H0547: 3, H0689: 3,<br>H0658: 3, S0406: 3,<br>H0436: 3, L0779: 3, |
|---|---|
|   | Leu-25 to Arg-30,<br>Glu-41 to Thr-56,<br>Met-74 to Asn-81,<br>Tyr-108 to Thr-116,<br>Asp-126 to Gly-131,<br>Met-141 to Asp-<br>149,<br>Pro-170 to Tyr-184.   |
|   | 2985  |
|   | 33 - 584  |
|   | 810   |
|   | 1054812   |
|   | HKZBM58   |

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|                     |                     |                     | •                   |                     |                   |                     | _                   |                     |                     |                   |                   |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     | •,•                 |                     |                     |                     |
| H0686: 2, S0212: 2, | H0662: 2, S0356: 2, | S0358: 2, S0360: 2, | H0675: 2, H0580: 2, | H0370: 2, L0623: 2, | 486: 2, H0575: 2, | S0010: 2, H0428: 2, | H0628: 2, H0674: 2, | H0038: 2, H0056: 2, | S0440: 2, L0520: 2, | 764: 2, L0767: 2, | 794: 2, L0766: 2, | 775: 2, L0783: 2, | L0809: 2, L0791: 2, | ,0665: 2, H0659: 2, | H0651: 2, S0330: 2, | H0539: 2, H0134: 2, | .0754: 2, S0260: 2, | .0362: 2, L0361: 2, | H0668: 2, L0440: 1, | H0265: 1, H0295: 1, | S0114: 1, T0049: 1, | H0484: 1, H0661: 1, | H0638: 1, S0354: 1, | S0007: 1, S0045: 1,                           | S0132: 1, H0619: 1, | H0411: 1, S0222: 1, | H0392: 1, H0592: 1, | H0333: 1, H0574: 1, | F0039: 1, T0114: 1, |
| OH                  | OH HO               | 200                 | OH HO               | OH ·                | OH<br>H           | <u>S</u> 0          | OH.                 | OH.                 | <u>20</u>           | <u>P</u>          | <u>[</u> [        | <u>21</u>         | <u> </u>            | <u>07</u>           | OH.                 | OH HO               | <u>[</u> [0]        | <u> </u>            | OH .                | OH.                 | OS                  | OH .                | OH OH               | <u>                                      </u> | 200                 | OH OH               | OH OH               | OH<br>OH            | TO                  |
|                     |                     |                     |                     |                     |                   |                     |                     |                     |                     |                   |                   |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |
| -                   | *******             |                     |                     |                     |                   |                     |                     |                     |                     |                   |                   |                   |                     |                     |                     |                     | <del></del>         |                     |                     |                     | <u></u>             |                     |                     |   |                     |                     |                     |                     |                     |
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|                  |                  |                             |                  | ,                |                  |                  |                  |              |                  |                 |                  | <u> </u>         | •                |              |                  |                  |                  |                  |                    |              |                  |                  |                    |              | -                |                  |                    |                  |
| : 1,             |                  | <br>                        |                  | 5: 1,            | 3: 1,            | : 1,             | t: 1,            | 7: 1,        | :1,              | l: 1,           | : 1,             | ): 1,            | 2: 1,            | . 1,         | F. 1,            | 1:1,             | : 1,             | ): 1,            | .1,                | · 1,         | : 1,             | : 1,             | . 1,               | .1,          | . 1,             | D: 1,            | 3: 1,              | 5: 1,            |
| H0013: 1, L0021: | H0599: 1, T0082: | /4: I, HU38I<br>52: 1 H∩251 | F0110: 1, H0597: | 10327: 1, H0545: | H0178: 1, H0373: | 30320: 1, L0171: | H0266: 1, H0084: | 71: 1, H0687 | S0003: 1, S0214: | H044: 1, H0181: | .0055: 1, L0455: | H0163: 1, H0040: | HO551: 1, H0412: | 38: 1, H0100 | F0041: 1, H0494: | 10560: 1, H0561: | H0509: 1, S0150: | .0598: 1, H0529: | L0763: 1, L0637: 1 | 46: 1, L0804 | .0774: 1, L0776: | .0659: 1, L0526: | .0518: 1, L0519: 1 | 89: 1, L0666 | S0374: 1, H0519: | H0684: 1, H0660: | H0666: 1, H0648: 1 | H0522: 1, S0146: |
| 00H              | H05              | 408 E                       | TOI              | H03              | H01              | S03;             | H02              | H02          | 008              | 90H             | <u>1</u> 00      | H01              | H05              | S00.         | T00              | HOS              | H05              | L05              | 107                | 907          | 107              | <u>106</u>       | 105                | 107          | S03,             | 90H              | 90H                | H05              |
|                  |                  |                             |                  |                  |                  |                  |                  |              |                  |                 |                  |                  |                  |              |                  |                  |                  |                  |                    |              |                  |                  |                    |              |                  |                  |                    |                  |
|                  |                  |                             |                  |                  |                  |                  |                  |              |                  |                 |                  | _                | ,                |              |                  |                  |                  |                  |                    |              |                  |                  |                    |              | _                |                  |                    |                  |
|                  |                  |                             |                  |                  |                  | ,                |                  |              |                  |                 |                  |                  |                  |              |                  |                  |                  | .,               |                    |              |                  |                  |                    |              | _                |                  |                    |                  |
|                  |                  |                             |                  |                  |                  |                  |                  | <del></del>  |                  |                 |                  | <u></u>          |                  |              |                  |                  | •                | ·                |                    |              |                  |                  |                    | <u></u>      | •                |                  |                    |                  |
|                  |                  |                             |                  |                  |                  |                  |                  |              | <u> </u>         |                 |                  | _                |                  | -            | _                | _                |                  |                  | » ·                |              |                  | •                |                    | -            |                  |                  |                    |                  |
|                  |                  |                             |                  |                  |                  |                  |                  |              |                  |                 |                  |                  |                  |              |                  |                  |                  |                  |                    |              |                  |                  |                    | -            |                  |                  |                    | ,                |

| H0555: 1, S0028: 1,<br>L0742: 1, L0753: 1,<br>H0445: 1, H0595: 1,<br>S0434: 1, L0592: 1,<br>L0485: 1, L0608: 1,<br>S0194: 1 and L0600: 1. | L0747: 2, H0556: 1,<br>S0134: 1, H0341: 1,<br>S0444: 1, H0013: 1,<br>H0575: 1, H0650: 1,<br>H0687: 1, H0628: 1,<br>H0090: 1, H0616: 1,<br>H0551: 1, S0440: 1,<br>H0710: 1, L0748: 1,<br>L0740: 1 and S0434: 1. | H0560: 1, S0426: 1,<br>L0776: 1, L0545: 1,<br>L0588: 1, L0591: 1 and<br>H0542: 1. | L0483: 6, L0749: 5,<br>L0659: 4, L0766: 3,<br>L0591: 3, H0038: 2,<br>L0769: 2, L0665: 2,<br>L0438: 2, H0539: 2,<br>L0758: 2, L0759: 2,<br>L0588: 2, H0650: 1,<br>H0664: 1, S0360: 1,<br>S0003: 1, H0615: 1,<br>H0553: 1, H0644: 1, |
|---|--|---|--|
|   | Glu-12 to Thr-27, Met-45 to Asn-52, Tyr-79 to Thr-87, Asp-97 to Tyr-103, Met-120 to Asp- 128, Pro-149 to Tyr-163.  | Thr-8 to Ala-15,<br>Lys-29 to Ser-39,<br>Lys-44 to Asn-52,<br>Gly-61 to Pro-68.   |  |
|   | 2986   | 2987  | 2988   |
|   | 311 - 799  | 1446 - 661  | 889 - 305  |
|   | 811  | 812   | 813  |
|   | 1054813  | 1055012   | 1055174  |
|   | HTEOV06  | HAMGH34   | нтенР29  |

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|                  |         |        |                  |         |                     |                       |                      |                     |                     |                    |                     |                    |                  |                  |            |                    |          |                  |                  |           |                  |                  |             |                  |                  |                  |                  |                  |                  |
|                  |         |        |                  | _       |                     |                       |                      |                     |                     |                    |                     |                    |                  |                  |            |                    |          |                  |                  |           | -                |                  |             |                  |                  |                  |                  |                  |                  |
|                  |         |        |                  |         |                     |                       |                      |                     |                     |                    |                     |                    |                  |                  |            |                    |          |                  |                  |           |                  |                  |             |                  |                  |                  |                  |                  |                  |
|                  |         |        |                  |         |                     |                       |                      |                     | ,                   |                    |                     |                    |                  |                  |            |                    |          |                  |                  |           |                  |                  |             |                  |                  | _                |                  |                  |                  |
| 1,               | l,      | 1,     | 1,               | 1,      | <del></del>         | 57: 1.                | 9:6                  | 3,                  | 3,                  | 'n                 | 4                   | 2,                 | 1,               | 1,               | т <b>,</b> | 1,                 | <u>,</u> | 1,               | 1,               | 1,        | 1,               | ₩,               | 1,          | Η,               | 1,               | 1,               | 1,               | <b></b>          | 1,               |
| S0422: 1, L0770: |         | .0666: | S0374: 1, S0310: | 0126:   | L0748: 1, L0439: 1, | .0747: 1 and L0757: 1 | H0046: 13, L0439: 6, | S0360: 3, H0024: 3, | .0769: 3, L0805: 3, | .0748: 3, L0749: 3 | 10624: 2, H0100: 2, | H0520: 2, S0436: 2 | .0592: 2, H0685: | H0717: 1, H0661: | 10449      | S0420: 1, S0376: 1 | 0476:    | S0300: 1, L0717: | H0013: 1, H0156: | 1, H0575: | S0010: 1, S0474: | L0738: 1, H0178: | 6028:       | H0188: 1, H0687: | H0252: 1, H0428: | H0553: 1, S0036: | H0038: 1, H0264: | S0038: 1, H0561: | 0422:            |
| 2: 1, L          | 2: 1, L | 6:1,L  | 4: 1, S          | 0: 1, S | 8: 1, L             | 7: 1 an               | 46: 13               | 0: 3, H             | 9: 3, L             | 8: 3, L            | 4: 2, F             | 0: 2, S            | 2: 2, H          | 7: 1, F          | 4: 1, F    | 0: 1, S            | 7: 1, S  | 0: 1, L          | 3: 1, F          | 1: 1, H   | 0: 1, S          | 8: 1, H          | 8: 1, S     | 8: 1, F          | 2: 1, F          | 3: 1, S          | 8: 1, F          | 8: 1, H          | S0450: 1, S0422. |
| S042             | 9907    | L077   | 8037             | H052    | 1074                | L074                  | 00H                  | S036                | 1076                | L074               | H062                | H052               | L059             | H071             | 990H       | S042               | 2000     | S030             | H001             | L0021: 1  | S001             | L073             | H001        | H018             | H025             | H055             | H003             | 2003             | <b>S045</b>      |
|                  | -       |        |                  |         |                     |                       | Gln-2 to Asp-7,      | Lys-34 to Arg-53,   | Gly-61 to Glu-70.   | -<br>•             |                     |                    |                  |                  |            |                    |          |                  |                  |           |                  | ·                |             |                  |                  |                  |                  |                  |                  |
|                  |         |        |                  |         |                     |                       | 5867                 | *                   |                     |                    |                     |                    |                  | ٠                |            |                    |          |                  |                  |           | -                |                  | •           |                  |                  |                  |                  |                  |                  |
|                  |         |        |                  |         |                     |                       | 532 - 1914           |                     |                     |                    |                     |                    |                  |                  |            |                    |          |                  |                  |           |                  |                  | -           |                  |                  |                  |                  |                  |                  |
|                  |         |        |                  |         |                     |                       | 814 53               |                     |                     |                    |                     |                    |                  |                  |            |                    |          |                  |                  |           |                  |                  | <del></del> |                  | •                |                  |                  | •                |                  |
|                  |         |        |                  |         |                     |                       | 1055248              |                     |                     |                    | •                   |                    |                  |                  |            |                    | _        |                  |                  |           |                  |                  |             |                  |                  | -                |                  |                  |                  |
|                  |         |        |                  |         |                     |                       | HNOJJ32              |                     |                     |                    | -                   | 1                  |                  |                  |            |                    |          |                  |                  |           |                  |                  |             |                  |                  |                  |                  |                  |                  |

| :  | 134790,<br>191044,<br>600040,<br>600138  |
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|  | 19q13.4  |
| S0002: 1, L5566: 1,<br>L0803: 1, L0651: 1,<br>L0776: 1, L0789: 1,<br>S0330: 1, S0332: 1,<br>H0704: 1, S0406: 1,<br>L0740: 1, L0780: 1,<br>L0758: 1, L0759: 1,<br>H0595: 1, S0434: 1,<br>L0595: 1, S0026: 1,<br>H0543: 1, H0423: 1 and<br>H0008: 1. | Ala-1 to Phe-8,  Glu-16 to Gly-52,  Glu-16 to Gly-52,  Leu-94 to Lys-99,  Lor-94 to Lys-99,  Lor-94 to Lys-99,  Lor-123 to Glu-136,  Lor-124,  Lor-125,  Lor-125,  Lor-125,  Lor-126,  Lor-127:  Lys-179 to Pro-190,  H0170:  H0553:  Lys-277 to Thr-288,  H0624:  Glu-305 to Glu-334,  H0644:  Lys-277 to Thr-288,  H0624:  Lor-128:  Glu-328 to Glu-334,  H0644:  Lor-11 to Glu-417.  Lor-11 to Glu-417.  Lor-128: |
|  | Ala-1 to Phe-8,<br>Glu-16 to Gly-52,<br>Ser-64 to Glu-80,<br>Leu-94 to Lys-99,<br>Ser-123 to Glu-136,<br>His-157 to Ser-164,<br>Lys-179 to Pro-190,<br>Arg-220 to Glu-226,<br>Phe-244 to Arg-252,<br>Lys-277 to Thr-288,<br>Glu-305 to Gly-310,<br>Glu-328 to Gly-310,<br>Glu-328 to Gly-3110,<br>Pro-390 to Ala-401,<br>Pro-391 to Gln-417.   |
|  | 2990   |
|  | 2 - 1333   |
|  | 815  |
|  | 1055304  |
|  | HFPHF52  |

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|---|--|--|
| L0002: 1, L0717: 1,<br>H0369: 1, H0455: 1,<br>H0438: 1, H0642: 1,<br>H0331: 1, H0244: 1,<br>H0156: 1, S0010: 1,<br>H0052: 1, L0118: 1,<br>H0051: 1, T0010: 1, | S6028: 1, L0142: 1,<br>H0674: 1, T0027: 1,<br>L0435: 1, L0369: 1,<br>L0662: 1, L0658: 1,<br>L0659: 1, L0789: 1,<br>L0790: 1, L0791: 1, | AR053: 1, H0519: 1,<br>S0122: 1, H0672: 1,<br>H0539: 1, S0260: 1 and<br>L0592: 1.<br>AR089: 2, AR052: 2,<br>AR055: 2, AR039: 1,<br>AR060: 1, AR096: 1,<br>AR061: 1, AR104: 0<br>L0754: 7, L0748: 4,<br>S0007: 3, L0771: 3,<br>L0749: 3, L0771: 2,<br>H0618: 2, H0046: 2, |
|   |  | Pro-13 to Gly-25, AR089: 1, Arg-47 to Gly-54, AR055: Pro-74 to Lys-81, AR055: Glu-107 to Arg-137. AR061: L0754: S0007: 3, L0769: 3, L0769: 3, L0769: 3, L0600: 3, H0618: 2   |
|   |  | 2991   |
|   |  | 266 - 679  |
|   |  | 816  |
|   |  | 1055381  |
|   |  | HBNMF62  |

|  | 151670,<br>231680,<br>276700,<br>600374,<br>601780   |
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|  | 15q22.33-<br>q24.1   |
| L0763: 2, L0637: 2,<br>L0794: 2, L0659: 2,<br>H0660: 2, L0439: 2,<br>L0755: 2, T0002: 1,<br>H0583: 1, H0671: 1,<br>S0354: 1, S6016: 1,<br>H0586: 1, L0021: 1,<br>H0052: 1, S0051: 1,<br>H0052: 1, H0083: 1,<br>L0649: 1, L0546: 1,<br>L0649: 1, L0545: 1,<br>L0655: 1, L0545: 1,<br>L0665: 1, H0670: 1,<br>H0672: 1, S0378: 1,<br>H0696: 1, L0751: 1,<br>L0752: 1, L0758: 1, | Gly-8 to Arg-14, H0547: 8, L0666: 6, Pro-24 to Arg-29, S0026: 6, L0803: 5, Leu-64 to Arg-73, L0439: 5, L0740: 5, His-91 to Arg-97, L0754: 5, L0758: 5, Tyr-141 to Thr-148, L0362: 5, S0242: 5, Glu-153 to Met-158, H0038: 4, S0440: 4, Asp-173 to Arg-180, H0529: 4, L0800: 4, Lys-185 to Pro-199, L0662: 4, H0648: 4, Glu-228 to Asp-235, L0742: 4, L0752: 4, |
|  | Gly-8 to Arg-14, H0547: 8, L0666: 9 Pro-24 to Arg-29, S0026: 6, L0803: 5, Leu-64 to Arg-73, L0439: 5, L0740: 5, His-91 to Arg-97, L0754: 5, L0778: 5, Tyr-141 to Thr-148, L0362: 5, S0242: 5, Glu-153 to Met-158, H0038: 4, S0440: 4, Asp-173 to Arg-180, H0529: 4, L0800: 4, Lys-185 to Pro-199, L0662: 4, H0648: 4, Glu-228 to Asp-235, L0742: 4, L0752: 4,  |
| ·  | 2992   |
|  | 2 - 1048   |
|  | 817  |
|  | 1055426  |
|  | НТРНО72  |

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|---|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|--------------------|---------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------|------------------|-------------|
|   |  |                     | -                   |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |             |
|   |  |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             | •                |             |
| 3,                                      | ກໍຕ້   | · %                 | 3,                  | 3,                  | ۲,                  | ~ົາ                 | 2,                  | 2,                  | 2,                  | 2,                 | ر.<br>د             | 2,                  | 2,                  | 2,                 | 2,                  | 2,                | 1,               | 1,               | 1,               | ا,               | 1,               | 1,               | 1,               | Ι,               | 1,               | 1,          | 1,               | 1,          |
| 10550:                                  | 10622:   | .0794:              | 10144:              | .0757:              | 0212: 3             | 0360: 2             | <b>H0052</b> :      | 30003               | 10059:              | .0766:             | .0806:              | <b>I</b> 0520:      | 10658:              | 10521:             | .0270.              | .0608:            | 10170:           | 10149:           | 10125:           | 0376:            | 10580:           | [0549:           | [0612:           | H0586:           | <b>40632</b> :   | H0575:      | .0109:           | H0530:      |
| 17: 3, F                                | 51: 3, F<br>53: 3, I   | L0646: 3, L0794: 3, | .0517: 3, H0144: 3, | .0438: 3, L0757: 3, | JO785: 2, S0212: 2, | 30358: 2, S0360: 2, | H0013: 2, H0052: 2, | 10150: 2, S0003: 2, | 10644: 2, H0059: 2, | 0520: 2, L0766: 2, | .0804: 2, L0806: 2, | ,0659: 2, H0520: 2, | 10593: 2, H0658: 2, | 0330: 2, H0521: 2, | .0747: 2, L0750: 2, | 0756: 2, L0608: 2 | 10422: 2, H0170: | H0171: 1, H0149: | H0713: 1, H0125: | S0418: 1, S0376: | S0408: 1, H0580: | S0045: 1, H0549: | S0222: 1, H0612: | H0600: 1, H0586: | H0574: 1, H0632: | J0021: 1, F | H0004: 1, L0109: | .0738: 1, F |
| 8, [107]                                | , H02<br>, H05   | ).<br>1064          | 1.05                | <u> </u>            | 107                 | S035                | H00                 | H01;                | H06                 | 1052               | 1080                | 1065                | H05                 | S033               | L07                 | 107               | H04.             | H01,             | H07              | <b>S</b> 041     | S040             | S004             | S022             | )<br>H06         | H05′             | 100         | <u>H00</u>       | 107         |
| Leu-244 to Glu-258, L0717: 3, H0550: 3, | Lys-264 to Pro-281, H0251: 3, H0622: 3,<br>Asn-310 to Ser-316, H0553: 3, L0598: 3, | Glu-331 to Leu-349. |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |             |
| 244 to (                                | 310 to 1   | 31 to I             |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                   |                  | ,                |                  |                  |                  |                  |                  |                  |                  |             |                  |             |
| Leu-7                                   | Lys-2<br>Asn-3   | Glu-3               |                     |                     |                     |                     |                     |                     |                     |                    |                     | -                   |                     |                    |                     |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |             |
|   |  |                     |                     |                     | •                   |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             | -                |             |
|   |  |                     |                     |                     |                     |                     |                     |                     | · ·                 |                    |                     |                     |                     | •                  |                     |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |             |
|   |  |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                   |                  |                  | ····             |                  |                  |                  | •                |                  |                  |             |                  |             |
| •                                       |  |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     | ,                   |                    |                     |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |             |
|   |  |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |                  |             |
|   |  |                     |                     | •                   |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                   |                  |                  | •                |                  |                  |                  |                  |                  |                  |             |                  |             |
|   |  |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    |                     |                   |                  |                  | ·                |                  |                  |                  |                  |                  |                  |             |                  |             |
|   |  |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                    | -                   |                   | •                |                  |                  |                  |                  | •                |                  |                  |                  |             |                  |             |
|   |  |                     |                     |                     |                     | •                   |                     | •                   |                     |                    |                     |                     |                     |                    |                     |                   | •                |                  |                  |                  |                  | •                |                  |                  |                  |             |                  |             |

|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 123620,               | 00820                 |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|-----------------------|-----------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 22q11.23              |                       |
| L0041: 1, N0006: 1, | H0014: 1, L0163: 1, | S0051: 1, H0266: 1, | S0214: 1, H0615: 1, | H0428: 1, T0006: 1, | H0674: 1, H0068: 1, | S0036: 1, H0616: 1, | H0551: 1, H0100: 1, | H0494: 1, H0560: 1, | S0472: 1, H0646: 1, | L0770: 1, L0639: 1, | L0761: 1, L0772: 1, | L0773: 1, L0653: 1, | L0629: 1, L0657: 1, | L0529: 1, L0665: 1, | S0374: 1, H0519: 1, | H0682: 1, H0659: 1, | H0670: 1, H0666: 1, | H0672: 1, H0539: 1, | S0380: 1, S0404: 1, | S0406: 1, H0436: 1, | H0478: 1, H0627: 1, | S0028: 1, L0777: 1, | L0780: 1, L0755: 1, | L0731: 1, S0196: 1, | H0542: 1, H0423: 1, | S0424: 1, L0600: 1 and | H0352: 1. | L0754: 95, L0755: 38, | H0545: 20, H0617: 14, |
|                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                        |           | Glu-35 to Pro-41,     | Ala-55 to Arg-67,     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                        |           | 2993                  |                       |
|                     |                     |                     |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 2 - 1438              |                       |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 818                   |                       |
|                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1055439               |                       |
|                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HOPKL18               |                       |

|                       |                      |                     |   |  |   |   | ,                                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|-----------------------|----------------------|---------------------|---|--|---|---|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                       |                      |                     |   |  |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0751: 12, H0622: 11, | L0731: 10, L0659: 8, | L0777: 7, L0759: 7, | S0360: 6, H0544: 5,                     | L0764: 5, L0748: 5,                    | Leu-247 to Trp-252, H0546: 4, L0750: 4, | L0780: 4, L0603: 4,                     | H0620: 3, H0644: 3,                     | H0606: 3, H0059: 3, | L0771: 3, L0766: 3, |                     | H0684: 3, H0618: 2, | H0086: 2, H0181: 2, | L0644: 2, L0375: 2, | L0666: 2, L0664: 2, | L0744: 2, L0747: 2, | L0779: 2, L0752: 2, | L0757: 2, L0758: 2, | L0605: 2, H0624: 1, | H0171: 1, H0661: 1, | H0662: 1, S0046: 1, | H0549: 1, H0251: 1, | H0012: 1, T0003: 1, | H0039: 1, H0553: 1, | H0316: 1, H0040: 1, | H0477: 1, S0352: 1, | L0763: 1, L0769: 1, | L0796: 1, L0761: 1, | L0772: 1, L0773: 1, | L0648: 1, L0807: 1, |
| Ala-82 to Lys-87,     | Gly-94 to Asp-100,   | Lys-175 to Asp-181, | Asp-185 to Trp-190, S0360: 6, H0544: 5, | Gly-193 to Asp-199, L0764: 5, L0748: 5 | Leu-247 to Trp-252,                     | Pro-278 to Asp-283, L0780: 4, L0603: 4, | Arg-395 to Phe-402, H0620: 3, H0644: 3, | Pro-404 to Asp-410, | Pro-412 to Trp-420, | Gly-443 to Asp-450. | 1                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                       |                      | 1                   |   |  |   | ·                                       |   |                     |                     | -                   | -                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •••                 |                     |                     |                     |
|                       |                      |                     | ,                                       |  |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                       |                      | ,                   |   |  |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ···                 |                     | -                   |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |
|                       |                      |                     |   |  |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|   | 116806,<br>120120,<br>120120,<br>120436,<br>120436,<br>120436,<br>182280,<br>600163  |                      |
|---|--|----------------------|
|   | 3p21.3   |                      |
| L0658: 1, L0663: 1,<br>H0658: 1, S0332: 1,<br>H0555: 1, L0749: 1 and<br>L0597: 1. | L0748: 5, L0747: 5,<br>L0749: 3, L0439: 3,<br>L0749: 3, L0752: 3,<br>L07717: 2, L076: 2,<br>L0772: 2, L0776: 2,<br>L0753: 2, L0776: 2,<br>L0758: 2, L0605: 2,<br>H0580: 1, S0222: 1,<br>L0022: 1, L0157: 1,<br>H0014: 1, H0622: 1,<br>H0617: 1, H0640: 1,<br>H0616: 1, L0435: 1,<br>L0773: 1, L0764: 1,<br>L0773: 1, L0764: 1,<br>L0773: 1, L0764: 1,<br>L0773: 1, L0764: 1,<br>L0773: 1, L0764: 1,<br>L0773: 1, L0764: 1,<br>L0773: 1, L0764: 1,<br>L0773: 1, L0764: 1,<br>L0773: 1, L0764: 1,<br>L0773: 1, L0764: 1,<br>L0773: 1, L0764: 1,<br>L0779: 1, L0777: 1,<br>L0779: 1, L0777: 1,<br>L0779: 1, L0777: 1,<br>L0779: 1, L0777: 1,<br>L0779: 1, L0777: 1,<br>L0779: 1, L0777: 1,<br>L0779: 1, L0777: 1,<br>L0779: 1, L0777: 1,<br>L0779: 1, L0777: 1,<br>L0779: 1, L0777: 1,<br>L0779: 1, L0777: 1, | L0439: 13, H0424: 8, |
|   |  | Lys-18 to Glu-24,    |
|   | 2994   | 2995                 |
|   | 807 - 145  | 1845 -               |
|   | 819  | 820                  |
|   | 1055446  | 1055467              |
|   | HBAAE59  | HTXKD84              |

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|--------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|-----------|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|------------------|--------------------|------------------|------------------|--------------|
|                    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  |                  |              |
| ,,                 | + =+  | ` <b>_</b> ^        | ω,                  | χ,                  |                     | ໍ້                  | ų                   | ລົ                  | ~,                  | مî                  | <b>ئ</b>            | 4                   | oî:                 | . ∼į                 | ત્                  | ر.                  | ຼ         | ລົ                  | <u>_</u> ,         | Ĺ,                  | 1,                 |                     |                    |                  | 1,                 | 1,               |                  | <del>-</del> |
| 751:               | 135: 4  | 50: 7               | 135:                | 774: (              | 06:3                | .:                  | 524:                | 05:2                | 308:                | 13:2                | 390:                | 494:                | 59: 2               | 65: 2                | 520:                | 743: (              | L0779: 2, | :26                 | 64                 | :318:               | 556:               | 22                  | 120:               | :51:             | 586:               | 101:             | :669             | T0082:       |
| , LO7              |   | 150                 | , HO                | ,107                | , S02               | , H0                | , HO                | 200                 | H02                 | H00                 | H02                 | , HQ                | 1,106               | 1,                   | , H0                | 5                   | , LO      | 150                 | , SOC              | , S02               | , HO               | H07                 | , SQ2              | H03              | , HO               | H0,              | H05              | Ĭ,           |
| H0547: 8, L0751: 7 | LO///: 6, H0556: 4,<br>H0617: 4. L0435: 4.  | L0776: 4, L0750: 4, | 53:3                | H0038: 3, L0774: 3, | .0666: 3, S0206: 3, | .0605: 3, H0543: 3, | H0423: 3, H0624: 2, | S0418: 2, L0005: 2, | S0007: 2, H0208: 2, | S0132: 2, H0013: 2, | 70010: 2, H0290: 2, | H0213: 2, H0494: 2, | .0766: 2, L0659: 2, | .0663: 2, L.0665: 2, | .0438: 2, H0520: 2, | 10682: 2, L0743: 2, | .0748: 2, | .0758: 2, L0592: 2, | H0265: 1, S0040: 1 | H0295: 1, S0218: 1, | H0657: 1, H0656: 1 | S0001: 1, H0402: 1, | H0459: 1, S0420: 1 | S0046: 1, H0351: | H0602: 1, H0586: 1 | .0622: 1, H0101: | S0280: 1, H0599: | H0575: 1     |
|                    | )<br>H06  | 1.07                | H0253: 3, H0135: 3, | 00H                 | 100                 | <u> 1</u> 08        | H04                 | <b>S</b> 041        | 2000                | S013                | T00                 | H02                 | 107                 | 106                  | 201                 | 90H                 | 707       | 107                 | H02                | H02                 | 90H                | <u> </u>            | HQH                | 200              | 90H                | <u>1</u> 06      | S02              | H05          |
| ,                  | Aia-103 to 1 nr-114, LO///: 6, HUS36: 4,<br>Pro-123 to Leu-130. H0617: 4. L0435: 4. | Leu-167 to Lys-175, | 195,                | 218.                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  |                  |              |
| le-54              | Leu-  | Lys                 | Pro-                | Ser-                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  |                  |              |
| to I               | 0<br>0<br>0<br>0  | 57 to               | 0 to                | 1 to                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  |                  |              |
| Leu-45 to Ile-54,  | 1a-10<br>ro-12  | eu-16               | Pro-190 to Pro-195, | Val-211 to Ser-218. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      | ٠                   |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  | ,                |              |
| 7 4                | ₹ ₫   | <u> </u>            | <u>~</u>            | >                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  |                  |              |
|                    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  |                  |              |
|                    |   |                     |                     |                     | · · · -             |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  |                  |              |
| 1177               |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  |                  |              |
|                    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  |                  |              |
|                    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  |                  |              |
|                    |   |                     |                     |                     |                     |                     |                     |                     | <u> </u>            | •                   |                     | •                   | •                   |                      |                     |                     |           |                     |                    | •                   |                    |                     |                    |                  |                    |                  |                  |              |
|                    |   |                     |                     |                     |                     |                     |                     | -                   | ٠                   |                     |                     |                     |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    | •                |                  |              |
|                    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  |                  |              |
|                    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           | •                   |                    |                     |                    |                     | ···                |                  |                    |                  |                  |              |
|                    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           |                     |                    | -                   |                    |                     |                    |                  |                    |                  |                  |              |
|                    |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |           |                     |                    |                     |                    |                     |                    |                  |                    |                  |                  |              |
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| Γ        |                    |          |                       |          |                  |                  |                  |                  | _                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              | ~        |           |                  |                  |            |                    |
|----------|--------------------|----------|-----------------------|----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|-----------|--------------|--------------|----------|-----------|------------------|------------------|------------|--------------------|
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          | *         |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            | $\dashv$           |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            | I                  |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
| 1,       | l,                 | 1,       | 1,                    | 1,       | T,               | 1,               | 1,               | 1,               | 1,               | Ξ,               | 1,               | 7                | ļ,               | <del>_</del>     | T,               | Ļ,               | 1,               | 1,               | l,               | T,       | Ļ,        | <del>,</del> | <del>ب</del> | 1,       | 1,        | 1,               | l,               | Ţ,         | 1,                 |
| H0052:   | H0309: 1, T0110: 1 | H0046:   | 50:                   | H0057:   | H0051: 1, H0271: | H0416: 1, H0188: | H0292: 1, H0286: | H0252: 1, H0615: | F0006: 1, H0418: | 10606: 1, H0674: | 24:              | 10068: 1, H0090: | H0040: 1, H0616: | .0067: 1, H0264: | 10488: 1, H0413: | 10623: 1, H0059: | .0351: 1, T0041: | 41:              | 100              | ä        | 8         | 25           | 3            | L0655: ] | L0664:    | H0689: 1, H0435: | H0659: 1, H0648: | , S0380: 1 | H0521: 1, S0168: 1 |
| 유        | 5                  | 8        | , H0050:              | 100      | 102              | 101              | 402              | 106              | <b>4</b> 5       | 308              | 101              | 8                | 901              | 402              | 46               | 8                | ģ                | 306              | S0210:           | L0520:   | L0770:    | L0662:       | L0522:       | 9        | 8         | £                | 90H              | 303        | 301                |
| 1,1      | 1,1                | 1, I     | 1, 1                  | 1,1      | 1,1              | 1,1              | 1,1              | 1,1              | 1, F             | 1,               | ,0455: 1, H0124: | 1,               | 1,1              | 1, I             | 1,1              | 1,1              | 1,1              | S0306: 1, H0641: |                  | 1,1      |           | 1, I         | Ť,           | •        |           | 1,               | 1,               | <u>.</u> ; | 1,                 |
| 18:      | 8                  | H0545: 1 | H0041: 1,             | H0024: 1 | 51:              | 16:              | 35               | 52:              | 96:              | 96               | 55:              | .89              | 6.               | 67:              | 88:              | 23:              | 51:              | 90               | <b>H0538</b> : 1 | 0369: 1, | .0763: 1, | .0771: 1,    | .0649:       | .0375: 1 | .0367: 1, | 389:             | 559:             | H0651: 1,  | 521:               |
| H0618:   | H03                | H65      | 9<br>H<br>H<br>0<br>H | 00H      | 8                | H                | H02              | H02              | 2                | 90H              | 3                | H00              | H00              | 100              | HG               | H06              | 103              | <b>S03</b>       | H05              | 23       | 2         | 103          | 9            | 23       | 133       | HOG              | HOE              | H          | HO                 |
|          |                    |          |                       | ,        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          | •         |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           | ,            |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
| 1        |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          | -                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  | •                |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
| <u> </u> |                    |          |                       |          |                  |                  |                  |                  | _                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | _        |           |              |              |          |           |                  | <del></del>      |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
| H        |                    |          |                       |          | _                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | •        |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
| $\vdash$ |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
|          |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |
| Щ        |                    |          |                       |          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |           |              |              |          |           |                  |                  |            |                    |

| H0134: 1, S3014: 1,<br>L0742: 1, L0744: 1,<br>L0740: 1, L0754: 1,<br>L0755: 1, L0759: 1,<br>L0603: 1, H0668: 1,<br>S0196: 1, H0422: 1 and<br>H0352: 1. | H0556: 2, H0135: 2,<br>S0040: 1, H0657: 1,<br>H0586: 1, H0013: 1,<br>H0428: 1, L0761: 1,<br>L0773: 1, L0768: 1,<br>L0774: 1, L0775: 1,<br>H0521: 1, L0748: 1,<br>L0749: 1, L0759: 1 and | L0439: 9, S0136: 7,<br>L0777: 3, L0779: 2,<br>H0624: 1, H0170: 1,<br>H0686: 1, H0656: 1,<br>S0408: 1, S0132: 1,<br>H0374: 1, H0266: 1,<br>H0551: 1, L0521: 1,<br>L0662: 1, L0794: 1,<br>L0766: 1, L0381: 1,<br>L0803: 1, L0659: 1,<br>L0809: 1, L0659: 1,<br>H0539: 1, L0752: 1,<br>H0539: 1, L0752: 1, |
|--|---|---|
|  | Val-7 to Glu-20,<br>Pro-99 to Lys-105,<br>Glu-113 to Val-119,<br>Ser-136 to Trp-142,<br>Ala-159 to His-164.   | Arg-44 to Val-54.   |
|  | 2996  | 2997  |
|  | 408 - 1364  | J - 1518  |
|  | 821   | 822   |
|  | 1055480   | 1055582   |
|  | HTXRR82   | HAIBU62   |

|   | 141750,<br>141800,<br>141800,<br>141800,<br>141850,<br>141850,<br>141850,<br>141850,<br>156850,<br>191092,<br>600140,  |
|---|--|
|   | 16p13.3  |
| L0731: 5, H0038: 3,<br>L0766: 2, H0683: 2,<br>H0670: 2, H0660: 2,<br>L0779: 2, L0749: 2,<br>L0779: 2, L0758: 2,<br>H0583: 1, S0420: 1,<br>S0360: 1, H0486: 1,<br>H0156: 1, H0599: 1,<br>H0581: 1, H0597: 1,<br>H0547: 1, S0210: 1,<br>L0794: 1, L0804: 1,<br>H0436: 1, S0027: 1,<br>L0596: 1, L0485: 1 and<br>H0542: 1. | L0769: 3, H0484: 1,<br>H0546: 1, H0178: 1,<br>H0553: 1, S0366: 1,<br>L0770: 1, L0761: 1,<br>L0772: 1, L0372: 1,<br>L0374: 1, L0645: 1,<br>L0771: 1, L0766: 1,<br>L0653: 1, L0666: 1,<br>L0664: 1, H0670: 1,<br>S0406: 1, L0777: 1,<br>L0601: 1 and S0446: 1. |
|   | Trp-8 to Gly-16,<br>Ala-18 to Ala-26,<br>His-28 to His-41,<br>Pro-79 to Glu-85.  |
| 2998  | 2999   |
| 1276 - 686  | 42 - 689   |
| 823   | 824  |
| 1055632   | 1055767  |
| HDTAY29   | нсоорл   |

| 601313,<br>601785 |                    | -                |                    |                   | <u>.</u>            | <u> </u>                           |                     |   |                     |   |                     |                                      |                                      |                                      |                                 |                              |                     |                     |                     |                        |                     |                     | <del></del>         |                     |                     |                     |                     |                     |
|-------------------|--------------------|------------------|--------------------|-------------------|---------------------|------------------------------------|---------------------|---|---------------------|---|---------------------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------|------------------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 9 9               |                    | •                |                    |                   | **                  | •                                  |                     |   |                     |   |                     |                                      |                                      |                                      |                                 |                              |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     | _                   |
|                   |                    |                  | :                  |                   |                     |                                    |                     |   |                     |   |                     |                                      |                                      | ,                                    |                                 | •                            |                     | •                   |                     |                        | 15q                 |                     |                     |                     |                     |                     | _                   | ÷                   |
|                   | AR096: 626, AR039: | 392, AR089: 360, | AR053: 315, AR060: | 315, AR033: 157,  | AR104: 153, AR061:  | 115, AR055: 31                     | L0518: 7, L0777: 6, | L0809: 5, L0744: 4,                     | L0649: 2, L0659: 2, | H0658: 2, L0748: 2,                     | L0747: 2, L0750: 2, | H0411: 1, H0013: 1,                  | L0021: 1, H0123: 1,                  | H0050: 1, H0163: 1,                  | H0560: 1, L0763: 1,             | L0770: 1, L0769: 1,          | L0761: 1, L0662: 1, | L0375: 1, L0776: 1, | L0439: 1, L0749: 1, | L0779: 1 and L0599: 1. | L0766: 6, L0776: 6, | L0777: 5, L0803: 4, | L0731: 3, L0759: 3, | S0222: 2, H0013: 2, | L0157: 2, L0805: 2, | L0666: 2, H0521: 2, | L0740: 2, L0361: 2, | H0170: 1, H0171: 1, |
|                   | Ala-20 to Arg-28,  |                  |                    | Pro-77 to Ala-82, | Thr-114 to Ala-119, | Pro-133 to Thr-141, 115, AR055: 31 | Gly-150 to Cys-161, | Pro-165 to Asn-177, L0809: 5, L0744: 4, | Thr-179 to Gly-188, | Glu-198 to Cys-212, H0658: 2, L0748: 2, | Ile-216 to Arg-222, | Val-254 to Arg-265, H0411: 1, H0013: | Ser-271 to Leu-276, L0021: 1, H0123: | Lys-281 to Asn-286, H0050: 1, H0163: | Pro-341 to Lys-346, H0560: 1, 1 | Ala-349 to Met-355, L0770: 1 |                     |                     |                     |                        | Ala-27 to Lys-35,   | Arg-63 to Ile-70,   | 05,                 |                     |                     | •                   |                     |                     |
|                   | 3000               |                  |                    |                   |                     |                                    |                     |   | •                   |   |                     |                                      |                                      |                                      |                                 |                              |                     |                     |                     |                        | 3001                |                     |                     |                     |                     |                     |                     |                     |
|                   | 2-1129             |                  |                    |                   |                     |                                    | ,                   |   |                     |   |                     |                                      |                                      |                                      |                                 |                              |                     |                     |                     |                        | 2 - 1957            |                     |                     |                     |                     |                     |                     |                     |
|                   | 825                |                  |                    |                   |                     |                                    |                     |   |                     |   |                     |                                      |                                      |                                      |                                 |                              |                     |                     |                     |                        | 826                 |                     |                     |                     |                     |                     |                     |                     |
|                   | 1055899            |                  |                    |                   |                     |                                    |                     |   |                     |   |                     |                                      |                                      |                                      |                                 |                              |                     |                     |                     |                        | 1056000             |                     |                     |                     |                     |                     |                     |                     |
|                   | HAMHN12            |                  |                    |                   |                     |                                    |                     |   |                     |   |                     |                                      |                                      |                                      |                                 |                              |                     |                     |                     |                        | HODIY67             |                     |                     |                     |                     |                     |                     |                     |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|------------------|---------------------|---------------------|--------------------|----------------------|---------------------|---------------------|---------------------|
| S0212: 1, S0442: 1, | S0358: 1, S0376: 1, | S0444: 1, S0360: 1, | L0717: 1, H0587: 1, | S0414: 1, H0250: 1, | H0427: 1, H0575: 1, | H0596: 1, H0546: 1, | S0003: 1, H0615: 1, | H0644: 1, H0040: 1, | H0477: 1, H0646: 1, | H0538: 1, L0763: 1, | <br>L0774: 1, L0809: 1, | L0519: 1, L0788: 1, | L4501: 1, L0665: 1, | S0374: 1, H0690: 1, | H0648: 1, H0651: 1, | S0328: 1, H0539: 1, | S0404: 1, H0436: 1, | L0750: 1, L0779: 1, | S0434: 1, L0599: 1 and | L0595: 1. | ı                | AR089: 1, AR039: 0, | AR033: 0, AR104: 0, | AR055: 0, AR061: 0 | L0747: 16, L0758: 8, | L0751: 7, L0774: 6, | H0617: 5, L0803: 5, | L0809: 5, L0794: 4, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     | ,                   |                     |                     |                     |                     | ·                   |                        |           | Asn-6 to Val-11. |                     |                     |                    |                      |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        |           | 3002             |                     |                     |                    |                      |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        |           | 2 - 1357         |                     |                     | •                  |                      |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                        |           | 827              |                     |                     |                    |                      |                     |                     |                     |
|                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     | •                   |                        |           | 1056097          |                     |                     |                    |                      |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         | ٠.                  |                     |                     |                     |                     |                     |                     |                        |           | HNTRS57          |                     |                     |                    |                      |                     |                     |                     |

| L0766: 4, L0666: 4,  H0265: 3, L0581: 4,  H0064: 3, L0763: 3,  H0082: 3, L0750: 3,  S0212: 2, S0418: 2,  S0212: 2, S0418: 2,  S0212: 2, S0418: 2,  H0642: 2, L0769: 2,  L0761: 2, L0775: 2,  L0761: 2, L0775: 2,  L0762: 2, L0659: 2,  L0763: 2, L0659: 2,  L0763: 2, L0659: 2,  L0763: 2, L0659: 2,  L0763: 2, L0769: 2,  H0647: 2, H0660: 2,  H0647: 2, H0660: 2,  H0648: 1, H0688: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0717: 1, H0738: 1,  H0719: 1, H0738: 1,  H0719: 1, H0738: 1,  H0719: 1, H0738: 1,  H0719: 1, H0738: 1, |          |                 |          |              |              |          |          |          |                  | •       |        |        |             |              |         |         |         |        |             | · ·             |              |              |        |   |              |          |        |       |             |                    |
|---|----------|-----------------|----------|--------------|--------------|----------|----------|----------|------------------|---------|--------|--------|-------------|--------------|---------|---------|---------|--------|-------------|-----------------|--------------|--------------|--------|---|--------------|----------|--------|-------|-------------|--------------------|
|   |          |                 |          |              |              |          |          |          |                  |         |        |        |             |              |         |         |         |        |             |                 |              |              |        |   |              |          |        |       | •           |                    |
|   | <u> </u> |                 |          |              |              |          |          |          |                  |         |        |        | · · · · · · |              |         |         |         |        |             |                 |              |              |        |   |              |          |        |       |             |                    |
|   |          |                 |          |              |              |          |          |          |                  |         |        |        |             |              |         |         |         |        |             |                 |              |              |        |   |              |          |        |       |             |                    |
|   |          |                 |          |              |              |          |          |          |                  |         |        |        |             |              |         |         |         | *      |             |                 |              |              |        |   |              |          |        |       |             |                    |
|   | ئيا      | <del>بر</del> . | æ,       | χ,           | ຕົ           | ٠,       | ~î       | ર્ય      | <b>ر</b> ر       | ຸດ:     | ຸດໂ    | ດ໌     | ຸດໂ         | ر<br>ر       | ,       | ري      | ر.      | ~;     | ج د         | 1,              | 1,           | 1,           | ۲,     |   | <u>_</u>     | <u>_</u> | 1,     | 1,    | 1,          | 1,                 |
|   | 7 :999   | 581: 4          | 534:     | )764: (      | 750: 3       | 418:2    | 013:2    | 0181:    | 769:             | 7775: 2 | 655: 2 | 659: 7 | 665: 2      | 0658:        | .0990   | 749:    | 7755: 2 | 589: 2 | 3423:       | 0170:           | 0685:        | 0738:        | 0484:  | 360: 1  | 0441:        | 0415:    | 0333:  | )156: | 0052:       | H0205: 1, H0150: 1 |
|   | 4, L0    | 4, L0           | : 3, L(  | :3, LC       | 3, L         | 2, S0    | 2, HC    | : 2, H   | : 2, L(          | 2, L0   | 2, 10  | 2,10   | 2,10        | : 2, H(      | : 2, H( | : 2, L( | 2, IC   | 2, LC  | 2, H(       | : 1, H          | : 1, H       | : 1, H       | : 1, H | 1, S0   | : 1, H       | 1, H     | : 1, H | 1, H( | : 1, H      | : 1, H             |
|   | .0766    | :7770           | 10265    | <b>10004</b> | <b>10682</b> | 30212:   | 30358:   | 10424    | <b>H0616</b>     | .0761   | .0375  | 7590   | .0663       | <b>HO547</b> | 0290F   | 10648   | .0752   | .0759  | 9090        | <b>H0624</b>    | <b>H0556</b> | <b>H0717</b> | 10341  | 30442   | <b>H0393</b> | 10392    | 10587  | 30280 | H0599       | <b>T0205</b>       |
|   |          | <u>н</u> .      | <u> </u> |              | <u>, 11</u>  | <u> </u> | <u> </u> | <u> </u> | <del>)-l-1</del> |         |        | Н      |             | پسلس         | )t(_    |         |         |        |             | <del>    </del> | <del></del>  | <u> </u>     |        | <u>, , , , , , , , , , , , , , , , , , , </u> | _==,         | _==      | _==    |       |             |                    |
|   |          |                 |          |              |              |          |          |          |                  |         |        |        |             |              |         |         |         |        |             |                 |              |              |        |   |              |          |        |       |             |                    |
|   |          |                 |          |              |              |          |          |          | •                |         |        |        |             |              |         |         |         |        |             |                 |              |              |        |   |              |          |        |       |             |                    |
|   | _        |                 |          |              |              |          |          |          |                  |         | ····   |        |             |              |         |         |         |        |             |                 |              |              |        |   |              |          |        |       |             |                    |
|   |          |                 |          |              |              |          |          |          |                  |         |        |        |             |              |         |         |         | •      |             |                 |              |              |        |   |              |          |        |       |             |                    |
|   |          |                 |          |              |              |          |          |          |                  |         |        |        |             | <u></u>      |         |         |         |        |             |                 | -            |              |        |   |              |          |        |       |             | , , ,              |
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|   |          |                 |          |              |              |          |          |          | •                |         |        |        |             |              |         |         |         |        |             |                 |              |              |        |   |              |          |        |       |             |                    |
|   |          |                 |          |              |              |          |          |          |                  |         |        |        |             |              |         |         |         |        | <del></del> |                 |              |              |        |   |              |          |        |       | <del></del> |                    |
|   |          |                 | •        |              |              |          |          |          |                  |         |        |        |             |              |         |         |         |        |             |                 |              |              |        |   |              |          |        |       |             |                    |
| 1   |          |                 |          |              |              |          |          |          |                  |         |        |        |             |              |         |         |         |        |             |                 |              |              |        |   | •            |          |        |       |             |                    |
|   |          |                 |          |              |              |          |          |          |                  |         |        |        |             |              |         |         |         |        |             |                 |              |              |        |   |              |          |        |       |             |                    |
|   |          |                 |          |              |              |          |          |          |                  |         |        |        |             |              |         |         |         |        |             |                 |              |              |        |   |              |          |        |       |             |                    |

|   | 143890,<br>151440,<br>600173,<br>600276,<br>600310,<br>601604,<br>601843  |
|---|---|
|   | 19p13.1   |
| H0375: 1, H0615: 1,<br>H0644: 1, H0606: 1,<br>H0038: 1, H0412: 1,<br>H0494: 1, S0422: 1,<br>S0426: 1, L0763: 1,<br>L0770: 1, L0639: 1,<br>L0649: 1, L0768: 1,<br>L0649: 1, L0768: 1,<br>L0783: 1, L0793: 1,<br>S0126: 1, H0144: 1,<br>S0374: 1, H0593: 1,<br>H0539: 1, H0518: 1,<br>H0576: 1, S0027: 1,<br>L0786: 1, L0780: 1,<br>L0786: 1, H0668: 1,<br>H0576: 1, H0668: 1,<br>H0657: 1, H0668: 1,<br>H0653: 1, H0668: 1,<br>H0653: 1, H0668: 1, | L0754: 8, L0741: 5,<br>L0748: 5, L0756: 5,<br>H0550: 4, L0751: 4,<br>L0758: 4, H0265: 3,<br>H0556: 3, L0806: 3,<br>S0418: 2, T0010: 2,<br>S0002: 2, L0777: 2,<br>L0755: 2, H0445: 2,<br>L0603: 2, H0170: 1, |
|   | Arg-13 to Glu-21,<br>Ser-36 to Gly-57.  |
|   | 3003  |
|   | 1 - 177   |
|   | 828   |
| ·   | 1056102   |
|   | HUKFL74   |

|   | 154705,<br>193300,<br>193300,<br>227646,  |
|---|---|
| L0615: 1, H0159: 1, S0040: 1, H0483: 1, H0254: 1, S0410: 1, H0574: 1, H0549: 1, H0052: 1, H0648: 1, H0052: 1, H0618: 1, H0150: 1, H0408: 1, H0416: 1, H0188: 1, H0644: 1, S0366: 1, H0659: 1, T0067: 1, L0763: 1, L0371: 1, L0650: 1, L0667: 1, L0771: 1, L0764: 1, L0771: 1, L0559: 1, L0778: 1, L0659: 1, L0778: 1, L0659: 1, L0778: 1, L0659: 1, L0778: 1, L0659: 1, L0778: 1, L0659: 1, L0778: 1, L0659: 1, L0778: 1, L0659: 1, L0778: 1, L0659: 1, L0778: 1, L0659: 1, L0778: 1, L0659: 1, L0778: 1, L0659: 1, L0778: 1, L0659: 1, L0778: 1, L0778: 1, L0778: 1, L0779: 1, L0777: 1, L0779: 1, | AR061: 3, AR039: 3, 3p25<br>AR089: 3, AR096: 2,<br>AR053: 2, AR060: 2,<br>AR055: 1, AR104: 1,               |
| L0615: 1,<br>S0040: 1,<br>H0254: 1,<br>H0734: 1,<br>H0052: 1,<br>H0052: 1,<br>H0644: 1,<br>H0644: 1,<br>H0644: 1,<br>L0763: 1,<br>L0763: 1,<br>L0763: 1,<br>L0763: 1,<br>L0763: 1,<br>L0763: 1,<br>L0763: 1,<br>L0763: 1,<br>L0771: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,<br>L0776: 1,   | Arg-7 to Thr-15, AR061:<br>Leu-23 to Asp-30, AR089:<br>Glu-37 to Val-48, AR053:<br>Thr-54 to Pro-64, AR055: |
|   | 3 - 344 3004 Arg-<br>Leu-<br>Glu-<br>Thr-   |
|   | 1056104 829 3   |
|   | HTEBF05 1056  |

| 253260,                    | 278720,             | 601154,             | 601253,             | 602011                 | 103950,               | 120580,               | 131440,                                   | 139130,               | 142680,                                   | 176260,             | 190450,             | 200990,             | 216950,             | 600228,             | 600414,             | 600618,             | 960209              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|----------------------------|---------------------|---------------------|---------------------|------------------------|-----------------------|-----------------------|---|-----------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                            |                     |                     |                     | i                      | 12p13                 |                       |   |                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | - 14                |                     |                     |                     |                     |                     |                     |
| 4R033: 1                   | L0665: 4, H0659: 2, | H0553: 1, H0038: 1, | L0659: 1, L0777: 1, | L0758: 1 and L0601: 1. | H0556: 29, L0748: 28, | L0745: 18, H0620: 16, | Glu-177 to Lys-183, H0040: 15, L0595: 14, | H0547: 13, S0358: 12, | Leu-252 to Gly-257, L0777: 12, H0559: 11, | S0046: 9, S0440: 9, | L0740: 9, H0265: 8, | H0494: 8, L0751: 8, | H0341: 7, S0408: 7, | L0646: 7, S0126: 7, | L0746: 7, L0747: 7, | H0543: 7, H0657: 6, | H0318: 6, H0052: 6, | H0135: 6, L0775: 6, | L0655: 6, L0666: 6, | H0519: 6, S0406: 6, | S0045: 5, H0486: 5, | H0581: 5, H0024: 5, | L0375: 5, L0659: 5, | H0520: 5, S0206: 5, | L0750: 5, L0752: 5, | F0002: 4, H0717: 4, | H0484: 4, S0376: 4, | H0497: 4, H0257: 4, | H0545: 4, H0644: 4, |
| Thr-103 to Thr-108. AR033: |                     |                     |                     |                        | Ala-95 to Ser-101,    | Pro-103 to Asp-108,   | Glu-177 to Lys-183,                       | Lys-226 to Lys-234,   | Leu-252 to Gly-257,                       | Gln-293 to Ser-301. |                     |                     |                     |                     |                     |                     |                     |                     |                     | .   = 3.            |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                            |                     |                     |                     |                        | 3005                  |                       |   |                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                            |                     |                     |                     |                        | 158 - 1084            |                       |   |                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                            |                     |                     |                     |                        | 830                   |                       |   |                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                            |                     |                     |                     |                        | 1056275               |                       |   |                       |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ,                          |                     |                     |                     |                        | HOPKD19               |                       |   |                       |   |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|                     |                     |                     |                     | _                    |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |
| 387: 4,             | 05: 4,              | 44: 4,              | 728: 4,             | 57: 4,               | 88: 4,              | 16: 3,              | 125: 3,             | 10: 3,              | 549: 3,             | 09: 3,              | 266: 3,             | 06:3,               | 50: 3,              | 44: 3,              | 72: 3,              | 62: 3,              | 28: 3,              | 754: 3,             | 34: 3,              | 92: 3,              | 567: 3,             | 352: 3,             | 713: 2,             | 656: 2,             | 638: 2,             | 60: 2,              | 222: 2,             | 523: 2,             | 635: 2,             |
| H0634: 4, H0087: 4, | .0766: 4, L0805: 4, | .0663: 4, H0144: 4, | 10134: 4, S0028: 4, | .0744: 4, L.0757: 4, | .0596: 4, L0588: 4, | S0424: 4, S0116: 3, | H0663: 3, H0125: 3, | S0356: 3, S0410: 3, | H0619: 3, H0549: 3, | S0182: 3, H0009: 3, | H0123: 3, H0266: 3, | .0483: 3, T0006: 3, | H0100: 3, S0150: 3, | S0144: 3, S0344: 3, | .0637: 3, L0772: 3, | .0764: 3, L0662: 3, | .0649: 3, S0328: 3, | H0521: 3, L0754: 3, | .0758: 3, S0434: 3, | S0436: 3, L0592: 3, | .0593: 3, H0667: 3, | H0422: 3, H0352: 3, | H0624: 2, H0713: 2, | H0716: 2, H0656: 2, | H0662: 2, H0638: 2, | S0442: 2, S0360: 2, | H0208: 2, S0222: 2, | H0592: 2, L0623: 2, | H0013: 2, H0635: 2, |
| H063                | T0766               | F0663               | H013                | L074                 | 10596               | S0424               | 990H                | S0356               | H0619               | S0182               | H012                | 10483               | H0100               | S0144               | 1.0637              | 1076                | 10649               | H052                | 1707                | S0436               | L0592               | H042                | H062                | H071                | )990H               | S0442               | H020                | H059                | H001.               |
|                     |                     |                     |                     |                      |                     | ۵                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |
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|                     |                     |                     |                     |                     |                     |                  |                     |           |                    |             |                    |           |                    |                     |                    |                     |                    |                      |                  |                  |                  |          |                  |                  |                  |                  |        |                  |           |
|                     |                     |                     |                     |                     |                     |                  |                     |           |                    |             |                    |           |                    |                     |                    |                     |                    |                      |                  |                  |                  |          |                  |                  |                  |                  |        |                  | ,         |
|                     |                     | • •                 |                     |                     |                     |                  |                     |           |                    |             |                    |           |                    |                     |                    |                     |                    |                      |                  |                  |                  |          |                  |                  |                  |                  |        |                  |           |
|                     |                     |                     |                     |                     |                     |                  |                     |           |                    |             |                    |           |                    |                     |                    |                     |                    |                      |                  |                  |                  |          |                  |                  |                  |                  |        |                  |           |
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| Ŀ                   |                     |                     |                     |                     |                     |                  |                     |           |                    |             |                    |           |                    |                     |                    |                     |                    | <del></del>          |                  |                  |                  |          |                  |                  |                  |                  |        |                  |           |
| 2,                  | ر                   | ળં                  | 2,                  | 2,                  | ર્ય                 | 7,               | 4                   | ر.<br>د   | ર્સ                | 2,          | બ                  | ર્લ       | ر<br>ا             | 4                   | 4                  | 2,                  | s,                 | <b>લ્</b>            | 2,               | ,                | 1,               | 1,       | <del>_</del>     | T,               | <u>_</u>         | <del>-</del>     | Ť,     | Τ,               | 1,        |
| H0199: 2, H0083: 2, | H0510: 2, H0594: 2, | 10288: 2, H0622: 2, | 10553: 2, H0111: 2, | H0617: 2, H0551: 2, | H0056: 2, S0038: 2, | 538:             | 30422: 2, H0529: 2, | L0769: 2, | 0639: 2, L0761: 2, | L0626: 2,   | 0768: 2, L0650: 2, | L0809: 2, | .0664: 2, H0699: 2 | 10593: 2, H0689: 2, | 10435: 2, H0658: 2 | 10539: 2, H0436: 2, | 3014: 2, L0743: 2, | .0591: 2, L.0485: 2, | .0581: 2, H0542: | 10008: 2, H0170: | H0171: 1, H0224: | , S0040: | 10295: 1, S0114: | H0583: 1, L0785: | H0661: 1, S0418: | S0420: 1, S0354: | S0007: | H0645: 1, H0393: | 278:      |
| , HO                | , H0                | , H0                | , H0                | , HO                | , SO                | 2, HO            | , H0                | , L0      | , LO               | , LÖ        | Ĭ,                 | Ľ         | , H0               | 2, H0               | 2, HO              | 2, H0               | j,                 | Ľ,                   | ), H0            | 2, H0            | l, H0            |          | 1, S0            | 1,10             | 1, 50            | , SO.            | 1, S0  | I, HC            | I, S0278: |
| 99:2                | 10:2                | 88: 2               | 53:2                | 17:2                | 56:2                | H0560: 2, H0538: | 22:2                | 0770: 2,  | 39:2               | 0641: 2,    | 68: 2              | 0658: 2,  | 4:2                | 93: 2               | 35:2               | 39:2                | 14: 2              | 91:2                 | 81:2             | 08:7             | 71: ]            | 10686: 1 | .36:             | 83:              | 61: ]            | 20:1             | H0580: | 54               | H0351:    |
| H01                 | H05                 | H02                 | H05                 | 90H                 | 9<br>H              | H05              | <b>S04</b>          | L07       | 200                | <u>1</u> 08 | 129                | <u>8</u>  | <u>1</u> 00        | H05                 | HQE<br>TO          | H05                 | <b>S</b> 30        | 103                  | 1.05             | <u>H</u>         | H0               | HOH      | H02              | H05              | H06              | <b>S</b> 04      | H05    | HO               | H03       |
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| 1,               | ` <b>-</b> - | 1,               | Ξ,               | 1,               | 1,       | 1,               | 1,               |           | 1,               | 1,      | 1,               | <u>,                                    </u> | 1,        | l,               | <b>.</b>         | <del>,</del>     | <u>_</u>         | 1,               | T,               | 1,                 | 1,      |                  | 1,               | 1,               | ·                | . <sub>1</sub>   | 1,               | 1,               | 1,        |
| H0369: 1, H0550: | 0090         | H0586: 1, H0587: | H0333: 1, H0643: | F0114: 1, H0101: | , H0599: | H0575: 1, H0036: | H0390: 1, H0196: | I, T0115: | H0597: 1, H0231: | 0046:   | H0041: 1, H0178: | .0471: 1, H0023:                             | l, H0057: | H0014: 1, H0201: | S0388: 1, H0071: | H0354: 1, H0355: | H0375: 1, S6028: | 10271: 1, H0687: | 10290: 1, H0286: | H0110: 1, S0022: 1 | 0615:   | H0428: 1, H0213: | 10030: 1, L0142: | H0628: 1, L0055: | H0212: 1, H0708: | H0316: 1, H0038: | H0063: 1, T0067: | H0379: 1, H0264: | 1, H0487: |
| 1. H             | : 1, H       | i. 1, H          | : 1, H           | : 1, H(          | : 1, H   | : 1, H           | : 1, H           | : 1, T(   | ': 1, H          | 5: 1, H | 1, H             | : 1, H(                                      | : 1, H(   | F. 1, H          | : 1, H(          | F. 1, H          | i: 1, S(         | : 1, H           | ): 1, H          | ): 1, S(           | 2: 1, H | 3: 1, H          | ∴ 1, U           | % 1, L           | 2: 1, H          | i. 1, H          | 3: 1, T          | ): 1, H          | 2: 1, H   |
| H0369            | H0431        | H0586            | H0333            | <b>T0114</b>     | H0069: 1 | H0575            | H0390            | T0103:    | H0597            | H0546   | H0041            | 1.0471                                       | T0003: 1  | H0014            | S0388            | H0354            | H0375            | H0271            | H0290            | H0110              | H0252   | H0428            | H0030            | H0628            | H0212            | H0316            | 3900H            | H0375            | H0272:    |
|                  |              |                  |                  | •                |          |                  |                  |           |                  |         |                  |  |           |                  |                  |                  |                  |                  |                  |                    |         |                  |                  |                  |                  |                  |                  |                  |           |
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|                  |              |                  |                  | ·                |          |                  |                  |           |                  |         |                  |  |           |                  |                  |                  |                  |                  |                  | _                  |         |                  |                  |                  |                  |                  |                  |                  |           |
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| H0433: 1, H0269: 1,<br>H0412: 1, H0413: 1, | H0623: 1, H0334: 1,<br>H0561: 1, S0450: 1, | H0633: 1, H0647: 1, | H0646: 1, S0002: 1,<br>L0369: 1, L0796: 1, | <br>  |   | ׆ |   | L0382: 1, L0368: 1, | L0793: 1, L0532: 1, | L0665: 1, H0702: 1, | S0374: 1, H0693: 1, | L0438: 1, H0684: 1, | H0670: 1, H0672: 1, | H0651: 1, S0380: 1, | S0152: 1, H0696: 1, | S0044: 1, H0555: 1, | L0609: 1, S3012: 1, | S0037: 1, L0742: 1, | L0756: 1, L0755: 1, | L0731: 1, L0759: 1, | S0031: 1, H0444: 1, | L0584: 1, L0589: 1, | L0594: 1, L0601: 1, | H0136: 1, S0192: 1, | S0194: 1 and H0423: 1. |
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|  | <u>.</u>                                   |                     |  | _     |   |   |   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                        |
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| AR061: 7, AR089: 7, | AR053: 5, AR060: 5, | AR033: 4, AR096: 4, | AR055: 4, AR039: 3, | AR104: 3, AR052: 0 | L0750: 33, L0588: 29, | H0341: 22, L0361: 22, | L0748: 19, H0657: 18, | H0648: 18, S0360: 17, | H0670: 17, S0358: 16, | H0170: 15, H0144: 14, | L0752: 14, L0757: 13, | L0758: 13, S0007: 12, | H0494: 12, L0520: 12, | H0543: 12, L0471: 11, | L0521: 11, L0767: 11, | H0659: 11, L0749: 11, | L0783: 10, H0305: 9, | S0046: 9, H0615: 9, | L0754: 9, H0624: 8, | H0014: 8, L0663: 8, | S0126: 8, H0672: 8, | L0591: 8, L0604: 8, | H0136: 8, S0045: 7, | H0031: 7, H0633: 7, | H0436: 7, S0028: 7, | H0125: 6, S0132: 6, | H0411: 6, H0392: 6, | H0574: 6, T0109: 6, | S0438: 6, L0762: 6, |
| Ser-48 to Asp-53,   | Asn-63 to Arg-69,   | Lys-77 to Lys-82.   |                     |                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 3006                | •                   |                     |                     |                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| 831                 |                     |                     |                     | _                  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 1056290             |                     |                     | •                   |                    |                       |                       |                       |                       | ٠                     |                       |                       |                       |                       |                       |                       |                       |                      |                     | i                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HLICR58             |                     |                     |                     |                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     | •                   |                     |

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| 4: 6,               | 8: 6,               | 4: 5,               | 36: 5,             | 23: 5,             | 12: 5,              | 51: 5,              | 9:5,                | 8:5,                | 4: 5,               | 7:5,                 | 2:5,                | 4: 5,               | 2: 4,               | 1:4,                | 36: 4,              | H0250: 4, H0421: 4, | 53: 4,              | H0083: 4, H0266: 4, | 7:4,                | H0135: 4, H0087: 4, | H0116: 4, H0100: 4, | 7:4,                | 7:4,                 | 6:4                 | 4.4,                | 2:4,                | 6:4,                | 4: 3,               | 59: 3,              |
| .0517: 6, S0374: 6, | H0660: 6, S0378: 6, | S0027: 6, S0114: 5, | 10333: 5, H0486: 5 | H0545: 5, H0123: 5 | 10328: 5, H0412: 5, | H0413: 5, L0761: 5, | .0776: 5, L0659: 5, | .0526: 5, H0658: 5, | 30380: 5, H0134: 5, | .0740: 5, L.0747: 5, | .0605: 5, L0362: 5, | H0422: 5, S0424: 5, | H0686: 4, S0342: 4, | 30376: 4, H0351: 4, | H0586: 4, L0586: 4, | H04,                | H0009: 4, L0163: 4, | H02                 | S0022: 4, H0617: 4, | 00H                 | H01(                | .0662: 4, L0497: 4, | .0655: 4, L.0527: 4, | .0657: 4, L0666: 4, | H0666: 4, S0044: 4, | H0576: 4, S3012: 4, | S3014: 4, L0756: 4, | H0171: 3, S6024: 3, | H0484: 3, H0669: 3, |
| 7: 6,               | 50: 6,              | 7:6,                | 33: 5,             | 15: 5,             | 28: 5,              | 13: 5,              | 6: 5,               | 6: 5,               | 0:5,                | io: 5,               | 5: 5,               | 22: 5,              | 36: 4,              | 6: 4,               | 36: 4,              | 50: 4,              | 9:4,                | 33: 4,              | 2: 4,               | 35: 4,              | 16: 4,              | 52: 4,              | 5: 4,                | 7:4,                | 56: 4,              | 76: 4,              | 4:4,                | 71: 3,              | £. 3,               |
| L051                | H066                | S002                | H033               | H05                | H032                | H04]                | 107                 | 1.052               | S038                | L074                 | 1000                | H047                | H068                | S037                | H058                | H02                 | <u>H00</u>          | HOOH                | S002                | H01:                | H01                 | 7000                | 1065                 | 1065                | H06                 | H057                | <b>S301</b>         | H01                 | H043                |
| -                   |                     |                     |                    |                    |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |
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| 3,                  | 3,                 | .3,                | 3,                  | .3,                 | .3,                 | ,3<br>,             | ŕ                   | 3,                 | 3,                  | 3,                   | 3,                  | 3,                 |                    | 3,                  | 3,                 | .3,                | 3,                  | .3,                 | 2,                  | .2,                 | 2,                  | .2,                 | .2,                 | : 2,                | 2,                  | .2,                 | .2,                 | 2,                  | 2,                  |
| S0410: 3, H0497: 3, | H0632: 3, L0623: 3 | H0599: 3, H0575: 3 | 70048: 3, H0581: 3, | H0597: 3, H0039: 3, | 10644: 3, H0163: 3, | H0551: 3, T0067: 3, | 70041: 3, H0509: 3, | S0422: 3, H0529: 3 | .0770: 3, L0769: 3, | .0648: 3, L.0768: 3, | .0364: 3, L0375: 3, | 0806: 3, L0782: 3, | 0543: 3, H0682: 3, | S0328: 3, S0330: 3, | .0751: 3, S0031: 3 | H0445: 3, H0595: 3 | ,0594: 3, S0026: 3, | 10665: 3, H0423: 3, | .0600: 3, T0002: 2, | H0685: 2, H0294: 2, | S0218: 2, H0650: 2, | H0483: 2, H0255: 2, | H0671: 2, H0662: 2, | H0306: 2, H0402: 2, | S0420: 2, H0580: 2, | 10393: 2, H0438: 2, | H0592: 2, H0587: 2, | .0622: 2, T0060: 2, | H0156: 2, H0098: 2, |
| S041                | 90H                | H05                | T007                | H05                 | 90H                 | H05                 | T007                | S042               | 1.07                | <u>106</u>           | <u>103</u>          | 108                | 105                | S032                | 1.07               | H04                | 105                 | 90H                 | 106                 | 90H                 | 502                 | H04                 | 90H                 | H03                 | S042                | H03                 | H05                 | 700                 | H01                 |
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| 2,                  | 3.2,                | 5:2                 | 2: 2,               | 4: 2,               | 5:2,                | 6: 2,               | 3: 2,                | 5: 2,               | S0036: 2, H0090: 2, | 9.2,                | 6: 2,               | 2,                  | . 2,                | .2,                 | 5. 2,               | ? 2,        | 4.2,                | 2: 2,               | 2,                  | 5: 2,               | 2,                  | 2,                   | 8: 2,              | ?                   | 2, 2,               | 5: 1,              | 9: 1,              | 3: 1,               | 0: 1,            |
| 0010                | 0318                | 0115                | 001                 | 1002                | 1001                | 1028                | 3890                 | 000,                | 600                 | 1005                | 106                 | 3650                | 0500                | 0549                | 0376                | 0542        | 1021                | 0392                | 0742                | 059                 | 059                 | 0599                 | 990]               | 019                 | 045                 | ,061               | 1015               | 1058                | 076              |
| 2, S                | 2, H                | 2, T                | 2, H                | 2, I                | 2, F                | 2, F                | 2, H                 | 2, T                | 2, H                | 2, F                | 2, F                | 2, L                | 2, T                | 2, I                | 2, L                | 2, L        | 2, I                | 2, 8                | 2, L                | 2,1                 | 2, I                | 2, I                 | 2, F               | 2,5                 | 2.5                 | 2,1                | 1, F               | 1, H                | 1,I              |
| T0082: 2, S0010: 2, | S0182: 2, H0318: 2, | H0309: 2, T0115: 2, | F0110: 2, H0012: 2, | H0023: 2, H0024: 2, | H0057: 2, H0015: 2, | H0687: 2, H0286: 2, | \$0003: 2, H0688: 2, | H0428: 2, T0006: 2, | 036:                | H0040: 2, H0059: 2, | H0625: 2, H0646: 2, | S0210: 2, L0598: 2, | L0763: 2, L0500: 2, | .0501: 2, L0549: 2, | .0803: 2, L0376: 2, | 653:        | 10547: 2, H0214: 2, | H0187: 2, S0392: 2, | S0390: 2, L0742: 2, | H0444: 2, L0596: 2, | ,0589: 2, L0590: 2, | .0581: 2, L.0599: 2, | 0603: 2, H0668: 2, | H0653: 2, S0192: 2, | H0542: 2, S0452: 2, | H0506: 2, L0615: 1 | H0394: 1, H0159: 1 | S0134: 1, H0583: 1, | H0656: 1, L0760: |
| <u>1</u>            | <u>S</u> 0          | H                   | <u>2</u>            | Ħ                   | Ħ                   | Ħ                   | <u>8</u>             | Ħ                   | <u>8</u>            | Ħ                   | Ħ                   | 80                  | 2                   | <u> </u>            | <u> </u>            | <u> </u>    | Ħ                   | Ħ                   | <u>S</u>            | Ħ                   | <u>김</u>            | <u> </u>             | <u> </u>           | 田                   | Ħ                   | Ħ                  | Ħ                  | SC                  | 互                |
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| L                   |                     |                     |                     |                     |                     |                     |                      |                     |                     | _                   | _                   |                     |                     |                     |                     | <del></del> |                     |                     |                     |                     |                     |                      |                    |                     |                     |                    |                    |                     |                  |
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| : 1,             | i: 1,              | 4: 1, | <b>‡</b> : 1, | 9: 1,    | 3: 1,    | 1: 1,        | 0.1,     | 9: 1,    | 9: 1,  | 5: 1,  | 1: 1,              | 6: 1,    | 1: 1,     | 2: 1,            | l: 1, | 5: 1,            | 8: 1,     | 2: 1,            | 6: 1, | 2: 1,               | 9: 1, | 8: 1,            | 5: 1,            | 2: 1,            | 7: 1, | 3: 1,            | 3: 1,     | i: 1,            | 0: 1,            |
| .0785: 1, S0116: | S0212: 1, H0661: 1 | 990]  | S0444: 1      | 1048     | S0278:   | H0441:       | T0040:1  | H0069:   | 1, H0209: 1                                  | 8001   | H0263: 1, H0231: 1 | 1054     | 1, H0081: | 70003: 1, H0082: | 005   | H0510: 1, H0375: | 1, H0188: | S0336: 1, H0112: | 090   | L0055: 1, H0032: 1, | 016   | H0211: 1, H0068: | S0366: 1, H0316: | H0634: 1, H0062: | [047  | H0488: 1, S0038: | S0448:    | S0464: 1, L0065: | H0131: 1, H0130: |
| 1, S             | 1, H               | 1, H  | Ξ,            | •        | T,       | <del>_</del> | ٦,       | 1, H     | 1, H   | 1, H   | 1, H               | 1, H     | 1, H      | 1, H             | 1, S  | 1, H             | 1, H      | 1, H             | 1, H  | 1, H                | 1, H  | 1, E             | 1, H             | 1, H             | 1, H  | 1, S             | 1, S      | 1, L             | 1, E             |
| 785:             | 212:               | 663:  | H0589:        | H0675: 1 | H0730:   | H0369:       | H0492:   | 10013:   | 10635:                                       | H0251: | 263:               | 327:     | H0150:    | 303:             | 373:  | 510:             | L0171: 1  | 336:             | 048:  | )55:                | 166:  | 211:             | 366:             | 634:             | 155:  | 488:             | H0279: 1, | ₹.               | 131:             |
| 2                | <u>S0</u> 2        | Ř     | E<br>E        | Ĕ        | <u>H</u> | <u>H</u>     | <u>H</u> | <u> </u> | <u>E</u>                                     | H0.    | H0.                | <u>H</u> | <u>H</u>  | 70               | HO.   | H<br>H           | 3         | 80               | ŎĦ.   | <u>Š</u>            | 9     | HO.              | 803              | Ř                | H     | <u>H</u>         | H<br>OH   | 20<br>20<br>20   | H0               |
|                  |                    |       |               |          |          |              |          |          |  |        |                    |          |           |                  |       |                  |           |                  |       |                     |       |                  |                  |                  |       |                  |           |                  | •                |
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|                  |                    |       |               |          |          |              |          |          |  |        |                    |          |           |                  |       |                  |           |                  |       |                     |       |                  |                  |                  |       |                  |           |                  |                  |
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|                  |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  |                  |                  |           |           |           |           |                  |                  |                     |                       |                   |                   |                     |                            |                            |
|                  |          |                  |             |               |           |           | `.          |               |          |           |           |           |           |                  |                  |                  |           |           | •••       |           |                  |                  |                     |                       |                   |                   |                     |                            |                            |
|                  |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  |                  |                  |           |           |           |           |                  |                  |                     |                       |                   |                   |                     |                            |                            |
| -                |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  |                  |                  |           |           |           | <u> </u>  |                  | •                |                     |                       | 6,                | λ,                | က်                  | 1,                         |                            |
| 47: 1,           | 12: 1,   | 37:1,            | 54: 1,      | 94: 1,        | 99: 1,    | 74: 1,    | 51: 1,      | 05: 1,        | 52: 1,   | 13: 1,    | 59: 1,    | 99: 1,    | 58: 1,    | 91: 1,           | 19: 1,           | 51: 1,           | 13: 1,    | 78: 1,    | 39: 1,    | 43: 1,    | 85: 1,           | 93: 1,           | 16: 1,              | H0352                 | 6, AR060:         | 5, AR052:         | 3, AR033:           | I, AR061:                  | I, AR039:                  |
| 1, H06           | , S0142: | i, L06           | •           | 1, L0794:     | l, L0499: | l, L0774: | l, L0651:   | , L0805:      | , L0652: | l, L0513: | 1, L0559: | l, L0809: | 1, L0368: | l, H06           | 1, H05           | 1, H06           | 1, S0013: | l, H0478: | l, L0439: | l, H0343: | 1, L04           | l, L05           | 1, H02              | l and                 | 6, AJ             | 5, AJ             | 3, AJ               | 1, AJ                      | 1,A                        |
| H0641: 1, H0647: | S0144: 1 | .0640: 1, L0637: | .0646: 1    | .0363: 1      | .0766: 1  | .0522: 1  | .0775: 1    | .0378: 1      | .0509: 1 | .0555: 1  | .0656: 1  | .0384: 1  | .0529: 1  | .0532: 1, H0691: | H0520: 1, H0519: | H0684: 1, H0651: | S0454: 1  | S0406: 1  | .0744: 1, | .0731: 1  | .0592: 1, L0485: | .0608: 1, L0593: | H0217: 1, H0216: 1, | H0008: 1 and H0352: 1 | AR096:            | AR089:            | AR053:              | Pro-128 to Trp-136, AR055: | Asp-393 to Ala-403. AR104: |
|                  | <u></u>  | <u> </u>         | <del></del> | <del></del> - | . <b></b> |           | <u> —</u> . | . <u> —</u> . | <u> </u> |           |           | <u> </u>  |           | _ <del></del> _  |                  | <u> </u>         | <u> </u>  | <u> </u>  |           |           |                  | _                |                     |                       |                   |                   |                     | 136,                       | 403.                       |
|                  |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  |                  |                  |           |           |           |           |                  |                  |                     |                       | Leu-76 to Lys-84, | Lys-90 to Leu-97, | His-115 to Thr-120, | o Trp-                     | to Ala                     |
|                  |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  |                  |                  |           |           |           |           |                  |                  |                     |                       | 1-76 tc           | 3-90 to           | -115 t              | -128 t                     | 5-393                      |
| _                |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  |                  |                  |           |           |           |           |                  |                  |                     |                       |                   | Ľ                 | His                 | P. P.                      | As                         |
|                  |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  |                  |                  |           |           |           |           |                  |                  |                     |                       | 3007              |                   |                     |                            |                            |
|                  |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  |                  |                  |           |           |           |           |                  |                  |                     |                       | 53 - 1276         |                   |                     |                            |                            |
|                  |          |                  |             |               |           |           |             |               | _        |           |           |           |           |                  |                  |                  |           |           |           |           |                  |                  |                     |                       | 53 -              |                   |                     |                            |                            |
|                  |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  | ,                |                  |           |           |           |           |                  |                  |                     |                       | 832               |                   |                     |                            |                            |
|                  |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  | •                |                  |           |           |           |           |                  | ,                |                     |                       | 376               |                   |                     |                            |                            |
|                  |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  |                  |                  |           |           |           |           |                  |                  |                     |                       | 1056376           |                   |                     |                            |                            |
|                  |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  |                  |                  |           |           |           |           |                  |                  | -                   |                       | E12               |                   |                     |                            | $\exists$                  |
|                  |          |                  |             |               | •         |           |             |               |          |           |           |           |           |                  |                  |                  |           |           |           |           |                  |                  |                     |                       | HISBE12           |                   |                     |                            |                            |
| <u> </u>         |          |                  |             |               |           |           |             |               |          |           |           |           |           |                  | <u>·</u>         |                  |           |           |           |           |                  |                  |                     |                       | <u> </u>          |                   |                     |                            |                            |

|   |  |   | :  |
|---|--|---|--|
|   |  |   | 120220,<br>120240,<br>123580,<br>151385, |
|   |  |   | 21q22.3                                  |
| H0539: 8, H0046: 3,<br>H0039: 2, H0553: 2,<br>H0090: 2, L0750: 2,<br>L0605: 2, S0282: 1,<br>H0431: 1, H0036: 1,<br>H0421: 1, H0196: 1,<br>T0003: 1, S6028: 1,<br>H0252: 1, H0031: 1,<br>H0111: 1, H0591: 1,<br>H0412: 1, T0068: 1,<br>S0044: 1, L0752: 1, | H0635: 1 and H0561:<br>1.              | His-8 to Gly-18, AR089: 3, AR055: 3, Aro-58 to Lys-68, AR096: 3, AR060: 2, Gln-109 to Lys-115, AR061: 2, AR053: 2, Val-175 to Pro-180, AR039: 2, AR104: 2, Ser-221 to Asp-228, AR033: 2  Thr-256 to His-261, S0132: 2, S0358: 1, Asp-287 to Asp-H0615: 1, T0023: 1, H0435: 1, S3014: 1, Thr-321 to Asp-328, L0740: 1, L0591: 1 and Asn-349 to Ile-357, L0362: 1.  Phe-376 to Glu-386, Pro-396 to Ser-409: |  |
|   | Lys-10 to Ser-16,<br>Pro-30 to Ala-36. | His-8 to Gly-18, Pro-58 to Lys-68, Gln-109 to Lys-115, AR096: Gln-109 to Lys-115, AR061: Val-175 to Pro-180, AR039: Ser-221 to Asp-228, AR033: Thr-256 to His-261, S0132: Asp-287 to Asp- Asp-287 to Asp- Asp-387 to Asp- H0615: Z94, Thr-321 to Asp-328, L0740: Asn-349 to Ile-357, L0362: Phe-376 to Glu-386, Pro-396 to Ser-409.   |  |
|   | 3008                                   | 3009  | 3010                                     |
|   | 1 - 210                                | 210 - 1436  | 1015 -<br>3060                           |
|   | 833                                    | 834   | 835                                      |
|   | 1056400                                | 1056407   | 1056454                                  |
|   | НАЈАН48                                | HSKJC61   | неевк29                                  |

|  |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |
|--|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 171860,<br>190685,<br>236200,<br>240300,<br>267750,<br>601072,<br>601145 |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -1                  |                     |                     |                     |
|  | L0751: 25, L0665: 23, | H0617: 9, H0620: 8, | L0657: 8, H0318: 7, | H0658: 7, H0650: 5, | H0483: 5, H0657: 4, | H0012: 4, H0024: 4, | H0689: 4, H0341: 3, | H0484: 3, H0618: 3, | H0253: 3, H0688: 3, | H0659: 3, H0670: 3, | L0603: 3, S0358: 2, | H0052: 2, H0615: 2, | H0264: 2, H0100: 2, | L0763: 2, L0637: 2, | L0651: 2, L0659: 2, | L0791: 2, L0663: 2, | H0555: 2, L0748: 2, | L0779: 2, S0282: 1, | H0255: 1, H0306: 1, | S0045: 1, L0717: 1, |
|  |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 3011                  |                     |                     |                     |                     |                     |                     | ,                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 1 - 1182              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 836                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 1056617               |                     |                     | 1                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |
|  | HCHWM19               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| L0394: 1, H0549: 1,<br>S6016: 1, S0222: 1,<br>H0455: 1, H0635: 1,<br>H0427: 1, S0280: 1,<br>H0042: 1, H0122: 1,<br>H0123: 1, H0350: 1,<br>L0163: 1, H0356: 1, | H0399: 1, H0594: 1,<br>H0252: 1, H0553: 1,<br>H0181: 1, H0673: 1,<br>L0638: 1, L0639: 1,<br>L0662: 1, L0766: 1, | H0690: 1, L0692: 1,<br>H0684: 1, H0682: 1,<br>H0660: 1, H0672: 1,<br>L0754: 1, L0758: 1,<br>S0458: 1, S0456: 1 and<br>H0352: 1. | AR052: 4, AR039: 3,<br>AR055: 3, AR060: 3,<br>AR061: 3, AR089: 2,<br>AR033: 2, AR053: 2,<br>AR096: 1, AR104: 1<br>H0624: 4, H0170: 3,<br>H0328: 3, H0329: 2,<br>H0013: 2, L0747: 2,<br>L0777: 2, H0046: 1 and<br>L0759: 1. |
|   |   |   | Thr-2 to Asn-10, Ser-72 to Lys-78, Gly-95 to Thr-101, Phe-134 to Ile-147, Lys-163 to Lys-172, Gln-199 to Glu-206, Ala-212 to Trp-224, Lys-230 to His-236, Arg-238 to Glu-244, Asp-249 to Gly-254, Met-260 to Tyr-266,      |
|   |   |   | 3012   |
|   |   |   | 85 - 1041  |
|   | 2010  |   | 837  |
|   |   |   | 1056625  |
|   |   |   | HE8NG02  |

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|---------------------|--|---|---|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|--|--------------------------------------|--|--------------------------------------|
|                     |  |   |   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 142946,             | 202200              |                     |  |                                      |  |                                      |
| ·                   |  |   |   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                        | 18p11.3-            | p11.2               |                     |  |                                      |  |                                      |
|                     | AR096: 14, AR089:<br>14, AR033: 10, AR061: | Asn-158 to Gly-165, 8, AR060: 8, AR052: | Thr-191 to Asn-199. 7, AR055: 6, AR053: | 5, AR104: 3, AR039: | 2 | L0766: 3, L0659: 3, | L0744: 3, L0794: 2, | L0805: 2, L0665: 2, | H0648: 2, H0305: 1, | H0586: 1, H0599: 1, | H0428: 1, H0551: 1, | S0038: 1, S0422: 1, | L0763: 1, L0637: 1, | L0662: 1, L0803: 1, | L0804: 1, L0806: 1, | L0776: 1, L0655: 1, | L0661: 1, L0787: 1, | S0374: 1, H0520: 1, | L0740: 1, L0750: 1, | L0777: 1, L0752: 1, | L0759: 1 and L0592: 1. | L0777: 6, L0766: 5, | L0747: 5, L0744: 4, | H0660: 3, L0750: 3, | H0657: 2, L0769: 2,                    | S0298: 1, S0360: 1,                  | H0730: 1, H0592: 1,                    | H0544: 1, H0629: 1,                  |
| Arg-272 to Arg-279. | Thr-32 to His-38, Thr-46 to Asn-55,        | Asn-158 to Gly-165,                     | Thr-191 to Asn-199.                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Glu-5 to His-15,    | Phe-20 to Lys-41,   |                     | Asn-146 to Thr-152, H0657: 2, L0769: 2 | His-157 to Phe-164, S0298: 1, S0360: | Arg-181 to Gly-191, H0730: 1, H0592: 1 | Lys-219 to Asn-224, H0544: 1, H0629: |
|                     | 3013                                       |   |   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 3014                |                     |                     |  |                                      |  |                                      |
|                     | 1287 - 601                                 |   |   |                     |   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 22 - 1125           |                     |                     |  |                                      |  | ·                                    |
|                     | 838  |   |   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 839                 |                     |                     |  |                                      |  |                                      |
|                     | 1056654                                    |   |   |                     |   |                     |                     |                     |                     |                     | . •                 |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                        | 1056666             |                     |                     |  |                                      | •                                      | ,                                    |
|                     | HWHKD22                                    |   |   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HOCPJ87             |                     |                     |  |                                      |  |                                      |

|   |  |  |  |          | -                   |   |                     |                     |                     |                        |           |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---|--|--|--|----------|---------------------|---|---------------------|---------------------|---------------------|------------------------|-----------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| S0334: 1, S0003: 1,<br>H0591: 1, H0641: 1,<br>L0598: 1, H0529: 1,   | F F  | L0646: 1, L0644: 1,<br>L0768: 1, L0775: 1, | L0806: 1, L0527: 1,<br>H0144: 1, L0438: 1. | <u>.</u> | H0648: 1, S0146: 1, | _ | L0751: 1, L0749: 1, | L0779: 1, L0755: 1, | L0731: 1, L0758: 1, | L0759: 1, S0434: 1 and | H0506: 1. | H0694: 92, L0766: 9, | L0747: 8, S0126: 7, | L0439: 7, H0266: 6, | L0776: 6, L0666: 6, | L0748: 6, L0759: 6, | H0622: 5, H0038: 5, | H0623: 5, L0763: 5, | L0659: 5, H0656: 4, | S0358: 4, S0476: 4, | H0486: 4, H0013: 4, | L0598: 4, H0529: 4, | L0662: 4, L0805: 4, | L0655: 4, L0663: 4, |
| Lys-261 to Leu-278, S0334: 1, S0003: 1<br>Thr-291 to Asn-297, H0591: 1, H0641: Glu-302 to Thr-312, L0598: 1, H0529: 1 | Ser-316 to Thr-342,<br>Gln-344 to Asp-367. |  |  |          |                     |   |                     |                     |                     |                        |           | Lys-6 to Ser-15,     | Ser-23 to Ala-28,   | Thr-81 to Gln-89,   | Gln-191 to Gly-198. |                     |                     |                     |                     | -                   |                     |                     |                     |                     |
|   |  |  |  |          |                     |   |                     |                     |                     |                        |           | 3015                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ·   |  |  |  |          |                     |   |                     |                     |                     | -                      |           | 3 - 2765             |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |
|   | <del>,</del>                               |  |  |          |                     |   |                     |                     |                     |                        |           | 840                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |  |  |  |          | ,                   |   |                     |                     | - 100               |                        | -         | 1056671              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |  |  |  |          |                     |   |                     |                     |                     |                        |           | HAAAA59              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|-----------|-----------|-----------|---------------------|---------------------|--------------------|--------------------|-----------------|
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           | ٠                   |                     |                    |                    |                 |
|                     |                    |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     | •         |           |           |                     |                     |                    |                    |                 |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     |                     |                    |                    |                 |
| ļ                   |                    |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     |                     |                    |                    |                 |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     | _                  |                     |                     |                     |                     |           |           |           |                     |                     |                    |                    |                 |
| 4,                  | Э,                 | ω,                  | 33                  | 3,                  | 33                  | ຕ໌                  | 3,                  | پ                   | 3,                  | ર્વ                 | ત્                  | ર્ય                 | ري<br>ر             | ر<br>ر              | ر<br>ا              | ,2,                 | <b>ب</b> ر         | ,<br>ب              | 2,                  | 2,                  | ર્વ                 | 7,        | 7,        | ત્        | ત્                  | 2,                  | Ļ,                 | -f                 | 1,              |
| 0434:               | H0657: 3, H0497: 3 | H0574: 3, H0328: 3, | H0615: 3, H0644: 3, | H0551: 3, L0770: 3, | .0764: 3, L0665: 3, | H0144: 3, S0374: 3, | H0547: 3, H0659: 3, | S0330: 3, L0752: 3, | H0445: 3, S0436: 3, | H0717: 2, H0638: 2, | S0045: 2, L0717: 2, | S0414: 2, H0485: 2, | S0280: 2, H0156: 2, | S0010: 2, H0032: 2, | H0494: 2, S0440: 2, | S0422: 2, L0667: 2, | 0646: 2, L0768: 2, | .0652: 2, L0438: 2, | H0658: 2, H0539: 2, | S0044: 2, H0555: 2, | .0744: 2, L0751: 2, | L0777: 2, | L0758: 2, | L0581: 2, | .0593: 2, H0653: 2, | S0276: 2, H0543: 2, | .0411: 1, H0556: 1 | H0220: 1, H0738: 1 | 9049:           |
| : 4, S              | 7: 3, H            | F. 3, H             | 5: 3, H             | : 3, L              | 3, L                | F. 3, S.            | 7: 3, H             | : 3, L(             | 5: 3, S             | 7:2, H              | : 2, L(             | : 2, H              | : 2, H              | : 2, H              | t: 2, S             | 2, L                | 2, L               | : 2, L              | 3: 2, H             | : 2, H              | F. 2, I             | : 2, L    | : 2, L    | 2, L      | : 2, H              | : 2, H              | : 1, H             | ): 1, H            | : 1, T          |
| H0521: 4, S0434: 4, | H0657              | H0574               | H0615               | H0551               | L0764               | H014                | H0547               | S0330               | H044                | H0717               | S0045               | S0414               | S0280               | S0010               | H049                | S0422               | L0646              | L0652               | H065                | S0044               | 1074                | L0749: 2, | L0731: 2, | L0592: 2, | L0593               | S0276               | L0411              | H022(              | S0114: 1, T0049 |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     |                     |                    |                    |                 |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     | •                   |           |           |           |                     |                     |                    |                    |                 |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     |                     |                    |                    |                 |
|                     |                    |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           | -         |           |                     |                     |                    |                    |                 |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     |                     |                    | 1                  |                 |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     | -                   |                    |                    |                 |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     |                     |                    |                    |                 |
|                     |                    |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     |                     |                    | •                  |                 |
| $\vdash$            |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     |                     |                    |                    |                 |
|                     |                    |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    | :                   |                     |                     |                     |           |           |           |                     |                     |                    |                    | ٠               |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     |                     |                    |                    |                 |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     |                     |                    |                    |                 |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     |                     |                    |                    |                 |
|                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |           |           |           |                     |                     |                    |                    |                 |

|                  |        |                     |                     |                    |                    |                  |                  |        |                  |          |                  |                  |                  |                  |                  |                     |                    |        |                  |                    |             | -                |          |                  |                  |                  |                    |                     |                 |
|------------------|--------|---------------------|---------------------|--------------------|--------------------|------------------|------------------|--------|------------------|----------|------------------|------------------|------------------|------------------|------------------|---------------------|--------------------|--------|------------------|--------------------|-------------|------------------|----------|------------------|------------------|------------------|--------------------|---------------------|-----------------|
|                  |        |                     |                     |                    |                    |                  |                  |        |                  |          |                  |                  |                  |                  |                  |                     |                    |        |                  |                    |             |                  |          |                  |                  |                  |                    |                     |                 |
|                  |        |                     |                     |                    |                    |                  |                  |        |                  |          |                  |                  |                  |                  |                  |                     |                    |        |                  |                    |             |                  |          |                  |                  |                  |                    |                     |                 |
|                  |        |                     |                     |                    |                    |                  | •                |        |                  |          |                  |                  |                  |                  |                  | ٠                   |                    |        |                  |                    |             |                  |          |                  |                  |                  |                    |                     |                 |
|                  |        |                     |                     |                    |                    |                  |                  |        |                  |          |                  |                  |                  |                  |                  |                     |                    |        |                  |                    |             |                  |          |                  |                  |                  |                    |                     |                 |
|                  |        |                     |                     |                    |                    |                  |                  |        |                  |          | _                |                  |                  |                  |                  |                     |                    |        |                  |                    | ·           |                  |          |                  |                  |                  |                    |                     |                 |
| 50: 1,           | 41: 1, | 6: 1,               | 4.<br>1,            | 8: 1,              | 32: 1,             | 93: 1,           | 22: 1,           | 92: 1, | 49: 1,           | 05: 1,   | 81: 1,           | 46: 1,           | 50: 1,           | 55: 1,           | 88: 1,           | H0029: 1, H0039: 1, | 06: 1,             | 55: 1, | 24: 1,           | 16: 1,             | 4.1,76      | 13: 1,           | 42: 1,   | 61:1,            | 09: 1,           | 41: 1,           | 42: 1,             | 26: 1,              | 71: 1,          |
| H0583: 1, H0650: | , H03  | S0212: 1, S0356: 1, | S0354: 1, S0444: 1, | 30360: 1, S0408: 1 | H0722: 1, S0132: 1 | H0619: 1, H0393: | H0437: 1, S0222: | , H05  | H0586: 1, H0349: | , L01    | F0048: 1, H0581: | H0374: 1, H0046: | H0123: 1, H0050: | .0471: 1, H0355: | S0250: 1, H0688: | , H00               | L0483: 1, T0006: 1 | , L00  | H0169: 1, H0124: | H0068: 1, H0316: 1 | , H02       | H0268: 1, H0413: | , T00    | S0016: 1, H0561: | S0438: 1, H0509: | S0150: 1, H0641: | H0646: 1, S0142: 1 | S0344: 1, S0426: 1, | .0371: 1, L0771 |
| 583: 1           | 16: 1  | 112: 1              | 54: 1               | 60: 1              | 722: 1             | 519: 1           | 437: 1           | 431: 1 | 586: 1           | 336: 1   | 348: 1           | 374: 1           | 123: 1           | <b>471: 1</b>    | 250: 1           | 029: 1              | <b>183:</b> 1      | 553: 1 | 169. 1           | 068: 1             | 591: 1      | 268: 1           | 056: 1   | 116: 1           | 138: 1           | 150:1            | 646: 1             | 34:1                | 371: 1          |
| )OH              | S01    | S02                 | S03                 | 803                | E<br>H             | Ĕ                | Ä                | Ď      | HO               | <u>H</u> | <u>10</u>        | <u>H</u>         | H<br>H           | <u>2</u>         | S02              | HO                  | <u>Š</u>           | E      | 9                | <u>ĕ</u>           | <u>H</u>    | ΞÓ               | <u>E</u> | 20               | <u> </u>         | S0.              | Ĥ                  | S0.                 | <u>0</u>        |
|                  |        |                     |                     |                    |                    |                  |                  |        |                  |          |                  |                  |                  |                  |                  |                     |                    |        |                  |                    |             |                  |          |                  |                  |                  |                    |                     |                 |
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|                  |        |                     |                     |                    | •                  |                  |                  |        |                  |          | _                |                  |                  |                  |                  |                     |                    |        |                  |                    | <del></del> |                  |          |                  |                  |                  |                    |                     |                 |
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| <u> </u>         |        |                     | ,                   |                    |                    |                  |                  |        |                  |          |                  |                  |                  |                  |                  |                     |                    |        |                  |                    |             |                  |          |                  |                  |                  |                    |                     |                 |
|                  |        |                     |                     |                    |                    |                  |                  |        |                  |          |                  |                  |                  |                  |                  |                     |                    |        |                  |                    |             |                  |          |                  |                  |                  |                    |                     |                 |
| <u> </u>         |        |                     |                     |                    |                    |                  |                  |        |                  |          |                  |                  |                  |                  |                  |                     |                    |        |                  |                    |             |                  |          |                  |                  |                  |                    |                     |                 |
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| L0521: 1, L0649: 1,<br>L0389: 1, L0803: 1,<br>L0804: 1, L0775: 1,<br>L0661: 1, L0629: 1,<br>L0657: 1, L0367: 1,<br>L0789: 1, L0664: 1,<br>H0520: 1, H0519: 1, | H0670: 1, H0672: 1,<br>S0378: 1, H0518: 1,<br>S0152: 1, S0350: 1,<br>H0522: 1, H0704: 1,<br>S0406: 1, S0390: 1, | S0027: 1, L0756: 1,<br>L0779: 1, L0780: 1,<br>L0757: 1, L0596: 1,<br>L0588: 1, L0589: 1,<br>L0366: 1, S0011: 1,<br>S0026: 1, H0665: 1,<br>S0194: 1, H0423: 1,<br>S0424: 1 and H0008: 1. | L0779: 8, L0665: 6,<br>L0731: 6, L0662: 4,<br>L0663: 4, L0754: 4,<br>H0486: 3, H0013: 3,<br>S6028: 3, H0031: 3,<br>L0598: 3, L0776: 3,<br>L0666: 3, H0144: 3,<br>S0126: 3, S0026: 3,<br>S0214: 2, H0428: 2, |
|   |   |   | lle-15 to Lys-33, Phe-99 to Lys-104, lle-107 to Cys-114.  |
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|                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                        |           |
| H0163: 2, H0090: 2, | H0488: 2, L0649: 2, | .0775: 2, H0660: 2, | .0751: 2, L0756: 2, | ,0755: 2, L0758: 2, | ,0759: 2, L0596: 2,                           | H0624: 1, S0046: 1, | H0645: 1, H0586: 1, | H0250: 1, H0156: 1, | H0318: 1, T0071: 1, | S0049: 1, H0457: 1, | .0471: 1, H0057: 1, | H0239: 1, H0266: 1, | H0687: 1, S0003: 1, | 10615: 1, H0553: 1, | 10644: 1, H0316: 1, | H0598: 1, H0591: 1, | S0294: 1, S0150: 1, | INKWN: 1, L0763: 1, | .0646: 1, L0766: 1, | .0375: 1, L0527: 1, | 0659: 1, L0518: 1, | .0438: 1, H0593: 1, | H0435: 1, H0648: 1, | S0380: 1, S0152: 1, | H0521: 1, H0627: 1, | S0390: 1, L0745: 1, | .0750: 1, L0777: 1, | .0752: 1, L0362: 1 and | H0543: 1. |
| E.                  | <u> </u>            | <u> </u>            | <u>闩</u>            | <u>1</u>            | <u>, , , , , , , , , , , , , , , , , , , </u> | <u> </u>            | <u>=</u>            | <u> </u>            |                     | S                   | <u> </u>            | <u>.</u>            | <u>.</u> E          | <u> </u>            | <u> </u>            | <u> </u>            | S                   | <u> </u>            |                     | ㅂ                   | <u>.</u>           |                     | .E.                 | S                   | <u> </u>            | S                   | <u>.</u>            |                        | H         |
|                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | - <del></del>       |                     |                     |                    |                     |                     |                     |                     |                     |                     |                        |           |
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|---|---|--|---|---|
| L0750: 4, H0622: 3,<br>L0792: 3, H0619: 2,<br>H0050: 2, L0759: 2,<br>H0624: 1, H0661: 1,  | 30360: 1, H0575: 1,<br>10597: 1, H0687: 1,<br>10412: 1, L0065: 1,<br>0761: 1, L0800: 1.   | 50747: 1, L0779: 1,<br>10747: 1, L0779: 1 and<br>10445: 1. | 20360: 18, L0794: 15, L0748: 15, L0748: 13, L0740: 10, H0521: 9, L0666: 8, L0766: 7, L0439: 7, H0046: 6, H0031: 6, L0803: 6, L0783: 6, H0547: 6, S0436: 6, L0595: 6, H0318: 5, L0460: 5, L0760: 5 | L0764: 5, L0779: 5,<br>S0192: 5, H0486: 4,<br>L0770: 4, H0658: 4,<br>S0152: 4, L0751: 4,<br>L0747: 4, L0750: 4, |
| Arg-1 to Thr-6, L0750: 4, H0622: 3<br>Arg-86 to Gly-91, L0792: 3, H0619: 2,<br>Ser-102 to Leu-107, H0050: 2, L0759: 2,<br>Leu-111 to Arg-122, H0624: 1, H0661: 1,<br>Arg-140 to Gly-145 1 0005: 1, 80376: 1 | Glu-170 to Ser-195, S0360: 1, H0575: Pro-200 to Thr-221, H0597: 1, H0687: Gly-234 to Asp-250. H0412: 1, L0065: L0761: 1, L0800: | <del></del>  |   |   |
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| 3,                  | <u>ښ</u>            | 3:3,                | 3,                  | 3,                  | 5:3,                | .3                  | <br>                 | F. 3,               | .;<br>,              | ε,                  | 2,                  | 1:2,                | 2,                  | ر<br>در             | 7:2                 | .2,                 | 5:2,                | : 2,                | 5:2,                | 1:2,                | 3: 2,               | ÷ 2,                | 2,                  | 2,                  | . 2,                | 2,                  | 2,          | 2,                  | 2,               |
| 0556                | 0013                | 800                 | 0615                | 600                 | 1064                | 0653                | 0663                 | 3014                | 0731                 | 0601                | 0116                | 990]                | 3358                | 3476                | 1058                | 9001                | 026                 | 047                 | [013                | 1055                | [041]               | 0505                | 0142                | 0772                | 5564                | 9590                | L0788: 2,   | 0438                | 0126             |
| 4, H                | 3, H                | 3, H                | 3, H                | 3, H                | 3, H                | 3, L                | 3, L                 | 3, S                | 3, L                 | 3, L                | , S                 | 2, H                | 2, S(               | 2, S(               | 2, H                | 2, H                | 2, H                | 2, L                | 2, H                | 2, H                | 2, H                | 2, H                | 2, S                | 2, L                | 2, L                | 2, L                | 2, L        | 2, L                | 2, S             |
| S0242: 4, H0556: 3, | S0408: 3, H0013: 3, | H0620: 3, H0083: 3, | S0250: 3, H0615: 3, | H0213: 3, H0090: 3, | H0268: 3, H0646: 3, | .0800: 3, L0653: 3, | .0809: 3, L.0663: 3, | H0689: 3, S3014: 3, | .0749: 3, L.0731: 3, | .0596: 3, L0601: 3, | H0657: 2, S0116: 2, | H0341: 2, H0661: 2, | S0418: 2, S0358: 2, | S0045: 2, S0476: 2, | H0393: 2, H0587: 2, | H0574: 2, H0069: 2, | 70048: 2, H0263: 2, | H0544: 2, L0471: 2, | H0673: 2, H0135: 2, | H0591: 2, H0551: 2, | H0412: 2, H0413: 2, | S0440: 2, H0509: 2, | H0131: 2, S0142: 2, | S0002: 2, L0772: 2, | .0662: 2, L5564: 2, | .0655: 2, L0659: 2, | .0647: 2, ] | .0664: 2, L0438: 2, | H0519: 2, S0126: |
| S0.                 | <u> </u>            | 유                   | 80                  | 呈                   | H                   | <u> </u>            | <u>ප</u>             | 丑                   | 2                    | 2                   | 出                   | 丑                   | 80                  | 80                  | <u>H</u>            | H                   | 2                   | H                   | H                   | H                   | H                   | 80                  | H                   | 80                  | <u>ධ</u>            | <u> </u>            | 2           | <u> </u>            | H                |
|                     |                     |                     |                     |                     |                     |                     |                      |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |             |                     |                  |
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| H0672: 2, H0696: 2, | S0406: 2, S0027: 2, | .0753: 2, S0434: 2, | 0587: 2, L0599: 2, | .0608: 2, S0196: 2, | H0543: 2, H0265: 1, | 30040: 1, H0295: 1, | H0294: 1, S0218: 1, | S0001: 1, H0638: 1, | 0534: 1, L0562: 1, | 30354: 1, S0410: 1, | H0208: 1, S0046: 1, | S0132: 1, S0278: 1, | H0261: 1, H0549: 1, | H0550: 1, S0222: 1, | 10610: 1, H0497: 1, | H0333: 1, H0632: 1, | 10485: 1, H0270: 1, | H0156: 1, L0021: 1, | S0010: 1, H0581: 1, | 10052: 1, H0085: 1, | 10596: 1, L0040: 1, | H0231: 1, H0546: 1, | H0569: 1, H0050: 1, | H0012: 1, H0024: 1, | H0015: 1, H0594: 1, | H0266: 1, H0688: 1, | H0622: 1, H0424: 1, | ,0055: 1, H0038: 1, | H0087: 1, T0067: 1, |
|                     | S                   | 니                   | <u>.</u>           | <u> </u>            | <u> </u>            | S                   | <u>工</u>            | S                   | <u></u>            | S                   | <u> </u>            | S                   | <u>;;;</u>          | <u> </u>            | <u> </u>            | <u> </u>            |                     | <u>H</u>            | S                   | <u> </u>            | <u>الحادة</u>       |                     |                     | <u>نظ</u>           |                     | <u>i.l.i.</u>       | <u>i-l-i</u>        |                     | #                   |
|                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •.                  |                     |                     |                     |                     | -                   |                     |                     |
|                     |                     |                     |                    |                     | ,                   |                     |                     |                     | •                  | -                   |                     |                     |                     |                     |                     | •                   | •                   |                     | <del></del>         |                     |                     | •                   |                     | -                   |                     |                     |                     |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     | ,                   |                     |                     |                     |                     |                     |                        |           | 121050,             | 131400,             | 147061,             | 147575,             | 147575,             |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                        |           | 5q23.3-             | q31.1               | ·                   |                     |                     |
| H0379: 1, H0264: 1, | H0056: 1, H0561: 1, | S0450: 1, S0150: 1, | H0647: 1, S0144: 1, | S0426: 1, L0640: 1, | L0763: 1, L0638: 1, | L0639: 1, L0637: 1, | L0372: 1, L0771: 1, | L0773: 1, L0649: 1, | L0804: 1, L0650: 1, | L0774: 1, L0776: 1, | L0807: 1, L0657: 1, | L0368: 1, L0791: 1, | L0793: 1, L0665: 1, | <u>_</u> | H0659: 1, H0670: 1, | H0648: 1, S0330: 1, | H0522: 1, H0631: 1, | S0206: 1, L0752: 1, | L0755: 1, L0758: 1, | L0759: 1, S0260: 1, | S0026: 1, H0542: 1, | H0422: 1, H0506: 1 and | H0008: 1. | L0754: 5, L0758: 5, | L0777: 4, L0752: 4, | H0574: 3, S0003: 3, | L0803: 3, L0790: 3, | L0666: 3, H0624: 2, |
|                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •        |                     | •                   |                     |                     |                     |                     |                     |                        |           | Ser-6 to Asp-14,    | Asp-24 to Glu-32,   | Asn-56 to Gln-62,   | Pro-83 to Pro-92,   | Gly-152 to Glu-169, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                        |           | 3019                |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>-</u>            |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                        |           | 230 - 1660          |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |          |                     |                     |                     | ,                   |                     |                     |                     |                        |           | 844                 |                     | •                   |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |          |                     | •                   |                     |                     |                     |                     |                     |                        |           | 1056767             |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                        |           | HKZBB48             |                     |                     |                     |                     |

|  | H0704: 1, H0555: 1,<br>L0740: 1, L0745: 1,<br>L0749: 1, L0731: 1,<br>L0759: 1 and L0601: 1. |
|--|---|
| 50358: 2, S0222: 2,<br>L0369: 2, L0771: 2,<br>L0768: 2, L0804: 2,<br>L0774: 2, L0775: 2,<br>L0776: 2, L0663: 2,<br>H0539: 2, L0742: 2,<br>L0779: 2, H0170: 1,<br>L0079: 2, H0170: 1,<br>L0079: 1, H0411: 1,<br>H0437: 1, H0586: 1,<br>H0497: 1, H0678: 1,<br>H0050: 1, S0368: 1,<br>H0060: 1, H0674: 1,<br>L0794: 1, L0806: 1,<br>L0794: 1, L0806: 1,<br>L0794: 1, L0806: 1,<br>L0798: 1, L0657: 1,<br>L0783: 1, L0664: 1,<br>H0144: 1, H0519: 1,  |   |
| 50358: 2, S0222: 2, L0369: 2, L0771: 2, L0768: 2, L0771: 2, L0776: 2, L0776: 2, L0776: 2, L0776: 2, L0776: 2, L0776: 2, L0776: 2, L0778: 2, L0778: 2, L0779: 2, L0779: 2, H0170: 1, L0779: 2, H0170: 1, H0580: 1, H0580: 1, H0576: 1, H0576: 1, H0576: 1, H0577: |   |
| 100 HOUST HOUSE HO | 5 4 4 N   |
| Arg-376 to Lys-384, Glu-393 to Ser-406, Ser-441 to Gly-453.  | HO:   |
| Arg-370<br>Glu-395<br>Ser-441  |   |
|  |   |
|  |   |
|  |   |

| 106150,<br>106150,<br>145260,<br>173870,<br>173870,<br>600759,<br>600996,<br>601744, | 102200,<br>106100,<br>131100,                                    | 131100,<br>131100,                         | 133780,<br>147050,  | 153700, | 161015, | 164009,<br>168461, | 168461, | 168461, | 180721, | 180840, | 191181, | 193235, | 209901, | 232600, | 259700, | 259770, |
|--|--|--|---------------------|---------|---------|--------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1942-944   | 11q13  |  |                     | •       |         |                    |         |         |         |         |         |         |         |         |         |         |
| S0418: 1, H0580: 1,<br>S0278: 1, H0013: 1,<br>H0046: 1 and H0547: 1.                 | AR104: 5, AR089: 5,<br>AR060: 2, AR055: 2,<br>AR096: 2, AR061: 1 |  |                     |         |         |                    |         |         |         |         |         |         |         |         |         |         |
| 3020 Pro-1 to Pro-9. SC SC Hu  |  | Arg-153 to Leu-169,<br>Arg-172 to Leu-195, | Glu-203 to Arg-216. |         |         |                    |         |         | •       | -       |         |         |         |         |         |         |
| 3020   | 3021   |  |                     |         |         |                    |         |         |         |         |         |         |         |         |         |         |
| 3 - 1316   | 3 - 650  |  |                     |         |         |                    |         |         |         |         | ٠       |         |         |         |         |         |
| 845  | 846  |  |                     |         |         |                    |         |         |         |         |         |         |         |         |         |         |
| 1056774  | 1056786  |  |                     |         |         |                    |         |         |         |         |         |         |         |         |         |         |
| HHAWB19  | HHATP38  |  |                     |         |         |                    |         |         |         |         |         |         |         |         |         |         |

| 600045,<br>600319,<br>600528,<br>601884 |  | 143890,<br>151440,<br>600173,<br>600276,<br>600310,<br>601604,<br>601843  |
|---|--|---|
|   |  | 19p13.1   |
|   | S0053: 3, H0551: 2,<br>S0418: 1, S0046: 1,<br>H0486: 1, H035: 1,<br>L0771: 1, H0672: 1,<br>S0206: 1, L0605: 1 and<br>S0276: 1. | L0731: 9, H0617: 7,<br>L0769: 7, L0809: 6,<br>L0806: 5, S0328: 5,<br>L0745: 4, L0764: 3,<br>L0754: 3, H0624: 2,<br>S0360: 2, H0550: 2,<br>H0033: 2, H086: 2,<br>H0011: 2, H0266: 2,<br>H0615: 2, L0770: 2,<br>L0794: 2, L0769: 2,<br>L0774: 2, L0493: 2,<br>L0742: 2, L0743: 2,<br>L0747: 2, L0755: 2,<br>L0747: 2, L0755: 2,<br>L0757: 2, L0591: 2,<br>L0593: 2, L0697: 2,<br>S0424: 2, H0170: 1,<br>H0556: 1, H0294: 1, |
|   | 3022 Tyr-47 to Arg-58.   | Val-212 to Phe-223.   |
|   | 3022   | 3023  |
| . ,                                     | 645 - 983  | 1 - 831   |
|   | 847  | 848   |
|   | 1056801  | 1056804   |
|   | HVVBE07  | НКАНВ85   |

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|--------------|---------------------|---------------------|---------------------|---------------------|----------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|--------------|--------------|--------------|---------------------|----------|---------------------------------------|--------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------|--------------|
|              |                     |                     |                     |                     |                |                     |                     |                     | <u> </u>           |                     |                     |                     |              |              |              |                     |          |                                       | -            |                      |                     |                     |                     |                     |                     | _                   |                     | ·<br>        |              |
|              |                     | _                   |                     |                     |                |                     |                     |                     |                    |                     |                     |                     |              |              |              |                     |          |                                       |              |                      |                     |                     |                     |                     |                     | _                   |                     |              | 1.           |
| 1, H0484: 1, | H0483: 1, S0358: 1, | S0376: 1, S0007: 1, | H0370: 1, H0013: 1, | H0706: 1, H0618: 1, | 1, H0052: 1,   | H0085: 1, H0545: 1, | H0012: 1, H0620: 1, | H0024: 1, S0051: 1, | H087: 1; H0213: 1, | HO031: 1, H0553: 1, | H0181: 1, L0455: 1, | H0334: 1, H0509: 1, | 1, L0800: 1, | l, L0766: 1, | l, L0653: 1, | .0776: 1, L0807: 1, |          | l, L0526: 1,                          | l, L0368: 1, | .0789: 1, L.0790: 1, | .0665: 1, H0690: 1, | H0435: 1, H0660: 1, | H0539: 1, S0152: 1, | H0521: 1, S0406: 1, | .0751: 1, L0750: 1, | .0779: 1, L0780: 1, | L0752: 1, L0758: 1, | 1, L0592: 1, | 1 and L0603: |
| H0341: 1     | H0483:              | S0376: 1            | H0370:              | H0706:              | H0253:         | H0085:              | H0012:              | H0024:              | H0687:             | H0031:              | H0181:              | H0334:              | L0772: 1     | L0768: 1, ]  | L0805: 1     | T0776:              | L0658: 1 | L0659: 1,                             | L0783: 1,    | T0789:               | T0665:              | H0435:              | H0539:              | H0521:              | L0751:              | L0779:              | L0752:              | L0587:       | L0599: 1     |
|              |                     |                     |                     |                     |                |                     |                     |                     | •                  |                     |                     |                     |              |              |              |                     |          |                                       |              |                      |                     |                     |                     |                     |                     |                     |                     |              |              |
|              |                     |                     |                     |                     |                |                     |                     |                     |                    |                     |                     |                     |              |              |              |                     |          |                                       |              |                      |                     |                     |                     |                     | -                   |                     |                     |              |              |
|              |                     |                     |                     |                     | <del>.</del> , |                     |                     |                     |                    |                     |                     | ·                   |              |              | ,            |                     |          |                                       | •            |                      |                     |                     |                     |                     |                     |                     |                     |              |              |
|              |                     |                     |                     | •                   |                |                     |                     |                     |                    |                     |                     |                     |              |              |              |                     |          |                                       |              |                      |                     |                     |                     |                     |                     |                     |                     |              |              |
|              |                     |                     |                     |                     |                |                     |                     |                     |                    |                     |                     |                     |              |              |              |                     |          | -                                     |              |                      |                     |                     |                     |                     |                     |                     |                     |              |              |
|              | -                   |                     |                     | •                   |                |                     |                     | -                   |                    | ٠                   |                     |                     |              |              |              |                     |          |                                       |              |                      |                     |                     |                     |                     |                     |                     |                     |              |              |
|              |                     | -                   | ,                   |                     |                |                     |                     |                     |                    |                     |                     |                     |              |              |              |                     |          |                                       |              |                      |                     |                     |                     |                     |                     |                     |                     |              |              |

| 100730,               | 118800,               | 123660,               | 135600,               | 157655,             | 186860,             | 201460,             | 205100,             | 213700,             | 262000,             | 600258,                                       | 601277,             | 601318              | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|
| 2q33-q34              | •                     |                       |                       |                     |                     |                     |                     |                     |                     |   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | •                    |                     |                     |                     |                     |
| S0212: 20, L0751: 14, | .0663: 11, L0731: 11, | H0083: 10, L0657: 10, | .0666: 10, H0547: 10, | H0550: 7, H0620: 6, | .0769: 6, H0689: 6, | 10123: 5, H0428: 5, | .0662: 5, S0356: 4, | H0059: 4, L0664: 4, | H0520: 4, H0670: 4, | .0581: 4, S0418: 3,                           | .0717: 3, H0618: 3, | 10494: 3, S0438: 3, | .0770: 3, L0659: 3, | H0683: 3, H0660: 3, | .0747: 3, L0758: 3, | S0434: 3, H0543: 3, | H0295: 2, H0295: 2, | H0341: 2, H0662: 2, | S0358: 2, S0360: 2, | H0675: 2, S0408: 2, | H0251: 2, H0051: 2, | H0594: 2, H0687: 2, | H0615: 2, H0031: 2, | H0413: 2, H0100: 2, | .0637: 2, L.0648: 2, | .0803: 2, L0774: 2, | .0783: 2, L0665: 2, | S0374: 2, S0126: 2, | H0658: 2, H0672: 2, |
|                       | <u>,</u>              | <u>i4</u>             |                       | <del></del>         |                     |                     |                     | <u>i-L-i</u>        | <u>i-L-i</u>        | , <u>, , , , , , , , , , , , , , , , , , </u> |                     | <u>i-l-i</u>        |                     | <u>14</u>           |                     | <u>S</u>            |                     | <u>144</u>          | S                   | <u>.44</u>          | <u> </u>            | <u> </u>            | <u> </u>            |                     | Ţ                    | <u>T</u>            | <u> </u>            | <u>.</u>            | 1                   |
| 3024                  | -                     | :                     | -                     |                     |                     |                     |                     |                     | •                   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                      |                     |                     | •                   |                     |
| 303 - 1               |                       |                       |                       |                     |                     |                     |                     |                     |                     |   |                     | ï                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
| 849.                  |                       |                       |                       |                     |                     |                     |                     |                     |                     |   |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
| 1056810               |                       |                       |                       |                     |                     |                     |                     |                     |                     |   |                     |                     | ,                   |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |
| HUSXA15               |                       |                       |                       |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |

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|---------------------|--|--------------------|------------------|--------------------|--------------------|------------------|------------------|---------------------|-------------|------------------|----------|--------------|-------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-----------------|-------------|------------------|------------------|--------------------|------------------|
|                     |  |                    |                  |                    |                    |                  |                  |                     |             |                  |          |              |             |             |                  |                  |                  |                  |                  |                  |                  |                  |                   |                 |             |                  |                  |                    |                  |
|                     |  |                    |                  |                    |                    |                  |                  |                     |             |                  |          |              |             |             |                  |                  |                  |                  |                  |                  |                  |                  |                   | -               |             |                  |                  |                    |                  |
|                     |  |                    |                  |                    |                    |                  |                  |                     |             |                  |          |              | <del></del> | <del></del> |                  |                  |                  |                  |                  |                  |                  |                  |                   |                 |             |                  |                  |                    |                  |
| 30: 2,              | 39: 2,                                 | 05: 2,             | 70: 1,           | 85: 1,             | 80: 1,             | 61: 1,           | 20: 1,           | 54: 1,              | 37: 1,      | 07: 1,           | 45: 1,   | 91: 1,       | 31: 1,      | 09: 1,      | 45: 1,           | 24: 1,           | 73: 1,           | 88: 1,           | 4.1,             | 506: 1,          | 64: 1,           | 72: 1,           | 4: 1,             | 52: 1,          | 09: 1,      | 93: 1,           | 590: 1,          | 584: 1,            | 30: 1,           |
| S0378: 2, S0380: 2, | S0406: 2, L0439: 2,                    | .0759: 2, L0605: 2 | H0352: 2, H0170: | H0686: 1, H0685: 1 | H0294: 1, S0180: 1 | S0298: 1, H0661: | H0664: 1, S0420: | S0442: 1, S0354: 1, | : 1, H06    | H0329: 1, S0007: | : 1, H06 | 1, H0391:    |             |             | H0575: 1, H0545: | 10009: 1, H0024: | H0057: 1, H0373: | H0188: 1, H0288: | H0286: 1, H0644: | H0617: 1, H0606: | H0087: 1, L0564: | S0440: 1, L0772: | .0374: 1, L.0644: | 0794: 1, L0652: | : 1, L0809: | .0543: 1, H0693: | H0593: 1, H0690: | H0682: 1, H0684: 1 | H0666: 1, S0330: |
| 80378               | <b>S0406</b>                           | 10759              | H0352            | H0686              | H0294              | S0298            | H0664            | S0442               | S0376       | H0329            | H0208    | H0549: 1     | H0392: 1    | H0632: 1    | H0575            | H0006            | H0057            | H0188            | H0286            | H0617            | H0087            | <b>S0440</b>     | L0374             | 10794           | L0653: 1    | L0543            | H0593            | H0682              | H0666            |
|                     |  |                    |                  |                    |                    |                  |                  |                     |             |                  |          |              |             |             | •                |                  |                  |                  |                  |                  |                  |                  |                   |                 |             |                  |                  |                    |                  |
|                     |  |                    |                  |                    |                    |                  |                  |                     |             |                  |          |              |             |             |                  |                  |                  |                  |                  |                  |                  |                  |                   |                 |             |                  |                  |                    |                  |
|                     | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                    | ,                |                    |                    |                  |                  |                     |             |                  |          |              |             |             |                  |                  |                  |                  |                  |                  |                  | <u>-</u>         |                   |                 |             |                  |                  |                    | <del></del>      |
| _                   |  | <u> </u>           |                  |                    |                    | ·····            |                  |                     |             | •                |          |              |             |             |                  |                  | <u> </u>         |                  |                  |                  |                  |                  |                   |                 |             | ·                |                  | <del></del>        |                  |
|                     |  |                    |                  |                    |                    |                  |                  |                     |             | ٠                |          |              |             |             |                  |                  |                  |                  |                  |                  |                  |                  |                   |                 |             |                  |                  |                    |                  |
|                     |  |                    |                  |                    |                    |                  |                  |                     |             |                  |          |              |             |             |                  |                  |                  |                  |                  |                  |                  |                  |                   |                 |             |                  |                  |                    |                  |
|                     |  |                    |                  |                    |                    |                  |                  |                     |             |                  |          |              |             |             |                  |                  |                  |                  |                  |                  |                  | •                |                   |                 |             |                  |                  |                    |                  |
|                     |  |                    |                  |                    |                    |                  |                  |                     | <del></del> |                  |          | <del> </del> |             |             |                  |                  |                  |                  |                  |                  |                  |                  |                   |                 |             |                  |                  |                    |                  |
|                     |  |                    |                  |                    |                    |                  |                  |                     |             |                  |          |              |             |             |                  |                  |                  |                  |                  |                  |                  |                  |                   |                 |             |                  |                  |                    |                  |
|                     |  |                    |                  |                    |                    |                  | ,                |                     |             |                  |          |              |             |             |                  |                  |                  |                  |                  |                  |                  |                  |                   |                 |             |                  |                  |                    |                  |

| H0696: 1, H0555: 1, | S0027: 1, L0748: 1, | L0750: 1, L0779: 1, | L0755: 1, H0445: 1, | S0436: 1, L0597: 1, | L0599: 1, H0542: 1 and | S0384: 1. |                  |                   |                   |                     |                     | -                   |                     |                     |                     | -                   |                     | -                   |                     |                     |                     |                     | S0212: 20, L0751: 14, | L0663: 11, L0731: 11, | H0083: 10, L0657: 10, | L0666: 10, H0547: 10, | Glu-104 to Arg-115, H0550: 7, H0620: 6, | Pro-135 to Pro-140, L0769: 6, H0689: 6, | Pro-150 to Asn-159, H0123: 5, H0428: 5, |
|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|------------------|-------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|---|---|---|
|                     |                     |                     |                     | _                   |                        |           | Pro-8 to Glu-16, | Lys-29 to Gly-34, | Gly-85 to Glu-92, | Lys-165 to Glu-172, | Glu-180 to Ser-186, | Ser-210 to Arg-215, | Glu-278 to Gln-288, | Lys-377 to Glu-383, | Lys-405 to Gly-410, | Lys-468 to Glu-474, | Asn-483 to Arg-488, | Gln-496 to Glu-502, | Val-555 to Gly-561, | Glu-611 to Pro-623, | Lys-631 to Trp-638, | Phe-641 to Gly-649. | Gly-20 to Tyr-30,     | Asn-40 to Glu-46,     | Ser-66 to Gly-75,     | Lys-85 to Gly-97,     | Glu-104 to Arg-115,                     | Pro-135 to Pro-140,                     | Pro-150 to Asn-159,                     |
|                     |                     |                     |                     |                     |                        |           | 3025             |                   |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | 3026                  |                       |                       |                       |   | ٠                                       |   |
|                     |                     |                     |                     |                     |                        |           | 1 - 1953         |                   |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | 1039 - 392            |                       |                       | ,                     |   | ,                                       |   |
|                     |                     | ,                   |                     |                     |                        |           | 850              |                   |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | 851                   |                       |                       |                       |   |   |   |
|                     |                     |                     |                     |                     |                        |           | 1056839          | •                 | -                 |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     | 1056856               |                       |                       |                       |   |   |   |
|                     |                     |                     |                     |                     |                        |           | HNOCH54          |                   |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | HOCPP16               |                       |                       |                       |   |   |   |

|   | -                   |                     |                    |                    |                     |                   |                    |                     |                     | <del> ,</del>      |                     |                     |                     |                     | <u></u>             |                     |                     | <del></del> |           | <u></u>             | -                   |                     |           |                   | •                |                  | · · · · · · ·    |                  |                  |
|---|---------------------|---------------------|--------------------|--------------------|---------------------|-------------------|--------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------|-----------|---------------------|---------------------|---------------------|-----------|-------------------|------------------|------------------|------------------|------------------|------------------|
|   |                     |                     |                    |                    |                     |                   |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |             |           |                     |                     |                     |           |                   |                  |                  |                  |                  |                  |
|   |                     |                     | _                  |                    |                     |                   |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |             |           |                     |                     |                     |           |                   |                  |                  |                  |                  |                  |
|   |                     |                     |                    |                    |                     |                   |                    |                     |                     |                    |                     | •                   |                     |                     |                     |                     |                     |             |           |                     |                     |                     |           |                   |                  |                  |                  |                  |                  |
|   |                     |                     |                    |                    |                     | •                 |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |             |           |                     |                     |                     |           |                   |                  | _                |                  |                  |                  |
| 6: 4,                                   | 4.4,                | 70: 4,              | 8: 3,              | 18: 3,             | 38: 3,              | 9.3,              | 60: 3,             | 58: 3,              | 13: 3,              | 95: 2,             | 62: 2,              | 0: 2,               | 38: 2,              | 51: 2,              | 87: 2,              | 31: 2,              | 00: 2,              | L0648: 2,   | L0774: 2, | 55: 2,              | 6: 2,               | 72: 2,              | S0406: 2, | 5: 2,             | 70: 1,           | 85: 1,           | 30: 1,           | 51: 1,           | 20: 1,           |
| 5, S035                                 | 4, LÓ6              | 4, H06              | t, S041            | 3, H06             | 3, S04              | 3, LO6            | 3, H06             | 3, 1.07             | 3, H05              | 2, H02             | 2, H06              | 2, S036             | 2, S04(             | 2, H00              | 2, H06              | 2, H00              | 2, H01              | 2, LO6      | 2, L077   | 2, L066             | 2, S012             | 2, H06              | 2, S04C   | 2, L060           | 2, H01           | 1, H06           | 1, S01           | l, H06           | 1, S04           |
| 0662:                                   | H0059: 4, L0664: 4, | H0520: 4, H0670: 4, | 0581: 4, S0418: 3, | 0717: 3, H0618: 3, | 10494: 3, S0438: 3, | 0770: 3, L0659: 3 | 10683: 3, H0660: 3 | J0747: 3, L0758: 3, | 30434: 3, H0543: 3, | 10624: 2, H0295: 2 | H0341: 2, H0662: 2, | S0358: 2, S0360: 2, | H0675: 2, S0408: 2, | H0251: 2, H0051: 2, | 10594: 2, H0687: 2, | H0615: 2, H0031: 2, | H0413: 2, H0100: 2, | .0637: 2,   | 0803: 2,  | .0783: 2, L0665: 2, | S0374: 2, S0126: 2, | H0658: 2, H0672: 2, | 50378: 2, | 0439: 2, L0605: 2 | H0352: 2, H0170: | 10686: 1, H0685: | H0294: 1, S0180: | S0298: 1, H0661: | H0664: 1, S0420: |
| 173, L                                  |                     | 216. H              | <u> </u>           | J                  | 프                   | <u>ם</u>          | 王                  | <u> </u>            | Ñ                   | I                  | <u> </u>            | <u> </u>            | 工                   | 工                   | 工                   | 프                   | <u> </u>            | J           | <u>.</u>  | 크                   | <u>X</u>            | H                   | <u> </u>  | 7                 | <u> </u>         | H                | Ξ                | <u> </u>         | H                |
| to Glu-                                 | Glu-1               | o Glu-              |                    |                    | •                   |                   |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |             |           |                     |                     |                     |           |                   |                  |                  |                  |                  |                  |
| Leu-167 to Glu-173, L0662: 5, S0356: 4, | Ile-191 to Glu-196, | Val-210 to Gln-216. |                    |                    |                     |                   |                    | •                   | •                   |                    |                     |                     |                     | ,                   |                     |                     |                     |             |           |                     |                     |                     |           |                   |                  |                  | ,                |                  |                  |
| 1,3                                     | <u> </u>            | >                   |                    |                    |                     |                   |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |             |           |                     |                     |                     |           | •                 |                  |                  |                  | •                |                  |
|   |                     |                     |                    | •                  |                     |                   |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |             |           |                     |                     |                     |           |                   |                  |                  |                  |                  |                  |
|   |                     |                     |                    |                    |                     |                   |                    |                     |                     |                    |                     |                     |                     |                     |                     | ,                   |                     |             |           |                     |                     |                     |           |                   |                  |                  |                  |                  |                  |
|   |                     |                     |                    |                    |                     |                   |                    |                     | <del></del>         |                    |                     |                     |                     |                     |                     |                     |                     |             |           |                     |                     |                     |           |                   |                  |                  |                  |                  |                  |
|   |                     |                     |                    |                    |                     |                   |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     | •           | •         |                     |                     | ···•··              |           |                   |                  |                  |                  |                  |                  |
|   |                     |                     |                    |                    | ٠                   |                   |                    |                     |                     |                    |                     |                     |                     |                     | ٠                   | •                   |                     |             |           |                     |                     |                     |           |                   |                  |                  |                  |                  |                  |
|   |                     |                     |                    |                    |                     |                   |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |             |           |                     |                     |                     |           |                   |                  |                  |                  |                  |                  |
|   |                     |                     |                    |                    |                     |                   |                    |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |             |           |                     |                     |                     |           |                   |                  |                  |                  |                  |                  |
| -                                       |                     |                     |                    |                    |                     |                   | ٠                  |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |             |           |                     |                     |                     |           |                   |                  |                  |                  |                  |                  |

|                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |   |                     |                        | 125852,                       |
|---------------------|---------------------|---------------------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|------------------------|-------------------------------|
|                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |    |                     |                     |                     |                     |                     |                     | ٠ |                     | ,                      | 11p15.5                       |
| S0442: 1, S0354: 1, | S0376: 1, H0637: 1, | H0329: 1, S0007: 1, | <u>_</u> | H0549: 1, H0391: 1, | H0392: 1, H0331: 1, | H0632: 1, T0109: 1, | H0575: 1, H0545: 1, | H0009: 1, H0024: 1, | H0057: 1, H0373: 1, | H0188: 1, H0288: 1, | H0286: 1, H0644: 1, | H0617: 1, H0606: 1, | H0087: 1, L0564: 1, | S0440: 1, L0772: 1, | L0374: 1, L0794: 1, | L0652: 1, L0653: 1, | L0809: 1, L0543: 1, | H0693: 1, H0593: 1, | Ξ, | H0684: 1, H0666: 1, | S0330: 1, S0380: 1, | H0696: 1, H0555: 1, | S0027: 1, L0748: 1, | L0750: 1, L0779: 1, | L0755: 1, L0759: 1, |   | L0597: 1, L0599: 1, | H0542: 1 and S0384: 1. | Н0617: 18, Н0545: 12, 11р15.5 |
|                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |   |                     |                        | Val-2 to Val-7.               |
|                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |   |                     |                        | 3027                          |
|                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     | -                   |                     |                     |                     |                     |    | •                   |                     |                     |                     | -                   |                     |   |                     |                        | 3 - 848                       |
|                     |                     |                     |          |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     | •                   |                     |    |                     |                     |                     |                     |                     |                     |   |                     |                        | 852                           |
|                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |   |                     |                        | 1056862                       |
|                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |   |                     |                        | HNOAH83                       |

| 126452,<br>126452,    | 141900,             | 141900,             | 141900,          | 141900,             | 141900,             | 142000,             | 142000,             | 142200,             | 142250,            | 142270,             | 176730,             | 176730,             | 176730,             | 190020,             | 191290,            | 192500,             | 192500,             | 194071,             | 194071,             | 204500,             | 600856,              | 601680,             | 602631,             | 602631              | •                   |                     |                     |
|-----------------------|---------------------|---------------------|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| .0439: 11, L0743: 10, | .0757: 8, S0212: 7, | 30360: 7, L0662: 7, | 50027 6 1.0779 6 | H0550: 5, H0575: 5, | H0253: 5, H0039: 5, | .0659: 5, H0521: 5, | .0747: 5, S0408: 4, | S0046: 4, H0427: 4, | 0599: 4, H0546: 4, | H0014: 4, L0764: 4, | .0774: 4, L0438: 4, | 30126: 4, H0672: 4, | .0731: 4, S0434: 4, | H0255: 3, H0662: 3, | 0354: 3, S0358: 3, | S0045: 3, H0370: 3, | S0280: 3, H0309: 3, | H0046: 3, H0266: 3, | H0412::3, H0413: 3, | S0440: 3, H0509: 3, | .0769: 3, L.0775: 3, | ,0666: 3, H0520: 3, | S0330: 3, H0539: 3, | .0744: 3, L0777: 3, | S0011: 3, S0192: 3, | H0484: 2, H0661: 2, | S0420: 2, S0356: 2, |
|                       | <u> </u>            | S                   | Ĭ Z              |                     | H                   | 7                   | <u> </u>            | S                   | 耳                  |                     | <u> </u>            | S                   | <u> </u>            | Ē                   | S                  | S                   | <u>S</u>            | Ħ                   | 耳                   | <u>S</u>            | <u> </u>             | <u> </u>            | S                   | <u> </u>            | S                   | H                   | <u>X</u>            |
|                       |                     | •                   | -                |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    | •                   |                     |                     |                     |                     | -                    |                     |                     |                     |                     |                     |                     |
|                       |                     |                     |                  |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |
|                       |                     |                     |                  | _                   |                     | _                   |                     |                     |                    |                     |                     | •                   |                     |                     |                    |                     |                     |                     |                     |                     |                      | •                   |                     |                     |                     |                     |                     |

| Γ-                  |                     |                     | · ·                 |                     |                     |                     |                     |                     |                     |                     |                     | <u>.                                      </u> |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     | $\neg$           |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|--------------------|----------------------|---------------------|---------------------|---------------------|---------------------|--------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|---------------------|------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     | $\dashv$         |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     | _                   |                    |                   |                  |                  |                  | _                |                  | _                |                    | _                   |                  |
| 7,                  | .2                  | 3,                  | ÷.                  | 5.2                 | H0706: 2, H0590: 2, | 2,                  | 10204: 2, H0544: 2, | <br>2,              | H0687: 2, H0622: 2, | H0040: 2, H0560: 2, | <u>ب</u>            | .:<br>   | 4                  | 4                    | 2,                  | 2                   | ?,                  | 5. 2,               | 7. 7.              | .;<br>2,          | 4.1.             | ): 1,            | 1,               | 3: 1,            |                  | 4.               | Ξ.                 | H0675: 1, H0619: 1, | <b>‡</b> : 1,    |
| S0376: 2, S0410: 2, | H0580: 2, S0007: 2, | H0208: 2, S0132: 2, | S0278: 2, H0549: 2, | H0592: 2, H0486: 2, | 359                 | S0474: 2, H0251: 2, | 54                  | .0163: 2, H0188: 2, | 362                 | )26(                | S0142: 2, S0210: 2, | .0637: 2, L0768: 2,                            | 0651: 2, L0527: 2, | .0782: 2, L.0783: 2, | .0528: 2, L0663: 2, | 30374: 2, H0547: 2, | H0651: 2, L0602: 2, | H0522: 2, H0555: 2, | 0740: 2, L0754: 2, | 0758: 2, S0196: 2 | 10542: 2, H0624: | 10265: 1, S0040: | S0342: 1, H0713: | 10294: 1, H0583: | S0180: 1, S0001: | H0663: 1, H0664: | S0418: 1, S0444: 1 | 0619                | H0392: 1, T0104: |
| S.                  | ); SC               | SC,                 | , HG                | H,                  | , H                 | H,                  | ), H                | , H                 | H'                  | ), H                | s,                  | 7,   | Ľ,                 | 7,                   | Z,                  | H,                  | ĭ                   | H'                  | ĭ,                 | , S0              | 五,               | ), S             | Ħ,               | Ħ,               | SS,              | l, H             | . SO               | l, H                | l, T(            |
| 6:2                 | 0.2                 | 8:2                 | 8:2                 | 2.7                 | 6:2                 | 4:2                 | 4.2                 | 3:2                 | 7:2                 | Ö:2                 | 2:2                 | 7:2  | 1:2                | 2:2                  | 2                   | 4:2                 | 11: 2               | 2.7                 | 0:2                | 8:2               | 2:2              | 55: 1            | 2:1              | 4.               | 9.               | 33: ]            | 8:1                | 75: ]               | 22: ]            |
| 037                 | 058                 | 020                 | 027                 | 1059                | 020                 | 047                 | 220                 | 016                 | 890                 | 8                   | 014                 | 89   | 965                | 078                  | 052                 | 037                 | 5901                | 1052                | 074                | 075               | 202              | 202              | 034              | 102              | 018              | 106              | 149                | 1901                | 1035             |
| S                   | Ξ                   | <u> </u>            | S                   | <u> </u>            | <u> 111</u>         | S                   | <u> </u>            |                     | <u> 111</u>         | <u> </u>            | S                   |  |                    |                      |                     | <u>.v</u>           | <u>;1;</u>          | <u> </u>            |                    |                   | <u>;11;</u>      | <u>نــــــز</u>  | S                | بلز              | S                | <u> </u>         | S                  | <u></u>             | 1                |
|                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     | ,                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
| į                   |                     |                     | ~                   | :                   |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    | -                    |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  | -                |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠.                  |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  |                  |                    |                     |                  |
| L                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                    |                      |                     |                     |                     |                     |                    |                   |                  |                  |                  |                  |                  | _                |                    |                     |                  |

|                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |   |                     |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
| H0587: 1, H0333: 1, | H0559: 1, L0623: 1, | F0040: 1, H0013: 1, | H0069: 1, H0108: 1, | H0036: 1, H0196: 1, | H0052: 1, H0085: 1, | H0205: 1, H0150: 1, | H0041: 1, H0009: 1, | H0123: 1, H0012: 1, | H0023: 1, H0024: 1, | S0388: 1, S0051: 1, | H0510: 1, H0594: 1, | H0284: 1, H0286: 1, | S0250: 1, H0688: 1, | H0428: 1, T0023: 1, | H0213: 1, H0030: 1, | H0553: 1, L0142: 1, |   | H0606: 1, H0674: 1, | S0364: 1, H0135: 1, | H0372: 1, H0087: 1, | H0264: 1, H0269: 1, | H0623: 1, H0059: 1, | L0564: 1, H0625: 1, | H0633: 1, H0646: 1, | H0529: 1, L0770: 1, | L3904: 1, L0772: 1, | L0372: 1, L0800: 1, | • | L0375: 1, L0376: 1, |
|                     | H                   |                     |                     | :                   |                     |                     |                     |                     |                     | <u> </u>            |                     |                     | <u> </u>            |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     | , <u></u>           |                     |                     |                     |                     |                     |   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ***                 |   |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
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|  |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 188826,             | 250100,             | 250800,             | 250800              |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
|--|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| •  |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 22q13.2-            | q13.31              |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
| .0806: 1, L0654: 1,<br>.0629: 1, L0657: 1, | <br>L0665: 1, H0593: 1, | H0689: 1, H0690: 1, | H0435: 1, H0670: 1, | S0328: 1, S0378: 1, | S0380: 1, H0696: 1, | S0406: 1, H0478: 1, | H0631: 1, S3012: 1, | S0028: 1, S0206: 1, | L0750: 1, L0755: 1, | L0759: 1, L0596: 1, | L0597: 1, S0026: 1, | H0665: 1, H0543: 1 and | S0424: 1. | L0743: 4, L0749: 4, | L0731: 4, H0265: 2, | H0213: 2, H0169: 2, | H0038: 2, H0543: 2, | H0170: 1, H0556: 1, | H0341: 1, H0661: 1, | S0420: 1, S0360: 1, | H0639: 1, H0438: 1, | H0036: 1, H0253: 1, | S0010: 1, H0052: 1, | H0327: 1, H0530: 1, | H0009: 1, L0471: 1, | H0644: 1, L0055: 1, |
|  |                         |                     |                     |                     |                     | <u> </u>            |                     | <u></u>             |                     |                     | .,=                 |                        | <u> </u>  | Gln-34 to Ala-45,   | Glu-47 to Leu-52,   | Lys-113 to Gln-121. |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |
|  |                         | -                   |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                        |           | 3028                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 79 - 480            | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                        |           | 853                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                         |                     |                     |                     | -                   |                     | •                   |                     |                     |                     |                     |                        |           | 1056875             |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | . •       | HE20U10             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|  |  | ,  | -0.0000 -0.00   |
|--|--|--|---|
|  | .                                      |  | 148066,<br>148066,<br>148066,<br>148067,<br>148067,   |
|  |  | ·  | 17q11.2-<br>17q12   |
| S0144: 1, S0002: 1,<br>L0775: 1, H0691: 1,<br>H0659: 1, H0648: 1,<br>S0350: 1, S3012: 1,<br>L0748: 1, L0740: 1,<br>L0754: 1, L0747: 1,<br>L0750: 1, L0753: 1,<br>L0755: 1, L0758: 1 and<br>S0276: 1. | H0615: 3                               | AR055: 28, AR053: 28, AR053: 22, AR033: 26, AR052: 13, AR089: 20, AR061: 13, AR060: 13, AR039: 11, AR096: 10, AR104: 5 L0751: 4, L0439: 3, L0777: 3, L0779: 2, L0778: 2, H0650: 1, H0328: 1, H0615: 1, L0435: 1, L0769: 1, L074: 1, L0376: 1, L0774: 1, L0376: 1, L0789: 1 and H0343: 1. | H0664: 9, H0370: 8,<br>H0059: 8, H0483: 4,<br>S0410: 4, L0751: 4,<br>L0747: 4, L0750: 4,<br>H0484: 3, L0664: 3, |
|  | Ser-13 to His-19,<br>Gly-41 to Arg-49. | Arg-17 to Lys-33.  | Arg-27 to Trp-35.   |
|  | 3029                                   | 3030   | 3031  |
|  | 884 - 738                              | 2 - 469  | 100 - 333   |
|  | 854                                    | \$55   | 856   |
|  | 1056927                                | 1056990  | 1057009   |
|  | HODGM46                                | HODFR44  | HCHND12   |

| 148069,             | 154275,             | 162200,             | 162200,             | 180240,             | 182138,             | 239100,             | 600119,             | 600119,             | 600881,             | 601363,             | 601687,             | 601954,             | 602403              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| .0749: 3, H0661: 2, | S0418: 2, S0408: 2, | H0246: 2, H0615: 2, | H0617: 2, L0637: 2, | .0766: 2, L0659: 2, | .0783: 2, L0665: 2, | S0374: 2, H0682: 2, | 10666: 2, L0754: 2, | .0759: 2, L0596: 2, | H0506: 2, H0624: 1, | S0114: 1, S0420: 1, | S0354: 1, S0358: 1, | 30376: 1, H0675: 1, | S0222: 1, H0156: 1, | H0590: 1, H0196: 1, | .0040: 1, H0597: 1, | H0457: 1, H0188: 1, | H0688: 1, H0622: 1, | H0424: 1, H0030: 1, | H0553: 1, H0644: 1, | H0673: 1, H0124: 1, | S0440: 1, S0472: 1, | 10647: 1, L0640: 1, | .0772: 1, L0764: 1, | .0765: 1, L0650: 1, | .0375: 1, L0776: 1, | .0792: 1, L0666: 1, | H0690: 1, H0435: 1, | H0670: 1, H0648: 1, | S0404: 1, L0755: 1, |
|                     | S                   |                     | <u> </u>            |                     | <u>-</u>            | S                   | <u></u>             |                     |                     | S                   | <u>.</u>            | S                   | S                   | <u> </u>            |                     |                     | <u> </u>            | <u> </u>            |                     | <u> </u>            | S                   | ш,                  |                     |                     |                     |                     |                     |                     | S                   |
|                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |
|                     |                     | -                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                        |           | 164731,             | 172400,             | 172400,             | 180901,             | 180901,             | 221770,             | 248600,             | 600918,                | 602716    |                       |                     |                        |                     |                     |                     |                     |                     |                 |      |                     |                     |                     |                     |                     |                   |                       |                      |                     |
|------------------------|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|-----------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------|------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|-----------------------|----------------------|---------------------|
|                        |           | 19q13.1             |                     |                     |                     |                     |                     |                     |                        |           |                       |                     |                        |                     | ,                   |                     |                     |                     |                 | *    |                     |                     |                     |                     |                     |                   |                       |                      |                     |
| L0731: 1, L0605: 1 and | L0600: 1. | S0051: 4, H0441: 3, | S0036: 3, L0769: 3, | L0438: 3, L0439: 3, | H0687: 2, L0665: 2, | S0031: 2, S6024: 1, | S0029: 1, H0455: 1, | H0052: 1, L0638: 1, | L0639: 1, S0053: 1 and | L0742: 1. | H0622: 42, S0380: 10, | S0368: 3, H0040: 1, | H0519: 1 and S0378: 1. | ·                   |                     |                     |                     |                     |                 |      |                     |                     | ٠                   |                     |                     | AR039: 13, AR033: | 12, AR104: 11, AR053: | 10, AR055: 9, AR052: | 9, AR089: 9, AR096: |
|                        |           |                     |                     |                     |                     |                     |                     |                     |                        |           | Ala-65 to Gly-77,     | Leu-79 to Lys-85,   | Gln-95 to Asp-103,     | Gln-113 to Ser-119, | Ser-230 to Gly-235, | Lys-358 to Phe-368, | Gln-397 to Thr-407, | Pro-474 to Val-484, | Asn-494 to Asp- | 505, | Glu-513 to Gly-521, | Ser-532 to Arg-539, | Thr-557 to Thr-562, | Pro-566 to Glu-571, | Pro-577 to Glu-582. | Arg-8 to Pro-18,  | Asp-76 to Arg-83,     | Glu-85 to Thr-94,    | Arg-139 to Ile-145, |
|                        |           | 3032                |                     |                     |                     |                     |                     |                     |                        |           | 3033                  |                     |                        |                     |                     |                     |                     |                     |                 |      |                     |                     |                     |                     |                     | 3034              |                       |                      |                     |
|                        |           | 2 - 553             |                     | ,                   |                     |                     |                     |                     |                        |           | 2 - 2206              |                     |                        |                     |                     |                     |                     |                     |                 |      |                     | -                   |                     |                     |                     | 2 - 988           |                       |                      |                     |
|                        |           | 857                 |                     |                     |                     |                     |                     |                     |                        |           | 828                   |                     |                        |                     |                     |                     |                     |                     |                 |      | ٠.                  |                     | _                   |                     |                     | 829               |                       |                      |                     |
|                        |           | 1057157             |                     |                     |                     |                     |                     |                     |                        | ,         | 1057170               |                     |                        |                     |                     |                     |                     |                     |                 |      |                     |                     |                     |                     |                     | 1057212           |                       |                      |                     |
|                        |           | HBHAC29             |                     |                     |                     |                     |                     |                     |                        |           | HTPFW87               |                     |                        |                     |                     |                     |                     |                     |                 |      |                     | ·                   |                     |                     |                     | HISAF60           |                       |                      |                     |

|  |  |                 |   |                     |                     |                     |                     |                     |                     |                     |                    |                 |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                 |                 |                     |                     |                     |                 |
|--|--|-----------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------|-----------------|---------------------|---------------------|---------------------|-----------------|
|  |  |                 |   | ,                   |                     |                     |                     |                     |                     |                     |                    |                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                 |                 |                     |                     |                     |                 |
| 060: 5, AR061:                         | 5<br>L0731: 12. L0747: 9.                          | 1: 5, L0759: 5, | 4: 4, H0013: 3,                         | .0748: 3, L0439: 3, | .0779: 3, H0575: 2, | H0052: 2, H0327: 2, | H0050: 2, H0083: 2, | .0769: 2, L0662: 2, | .0438: 2, H0539: 2, | .0743: 2, L0750: 2, | 0588: 2, H0716: 1, | 2: 1, L0443: 1, | 50001: 1, S0360: 1, | 10645: 1, H0411: 1, | H0587: 1, H0333: 1, | H0486: 1, S0010: 1, | S0050: 1, H0051: 1, | H0428: 1, H0553: 1, | H0032: 1, L0455: 1, | S0036: 1, H0038: 1, | H0412: 1, H0413: 1, | H0100: 1, T0042: 1, | D: 1, L0637: 1, | 5: 1, L0649: 1, | .0774: 1, L0776: 1, | .0655: 1, L0659: 1, | .0783: 1, L0529: 1, | 3: 1, L0790: 1, |
| Gln-180 to Asp-196,8, AR060: 5, AR061: | Thr-201 to Ser-213, 15<br>Lys-230 to Gln-235, L07. |                 | Thr-315 to Phe-321. H0644: 4, H0013: 3, | L074                | 1707                | H005                | H005                | J-01/6              | L043                | L074                | L058               | L0002:          | 2000                | H064                | H058                | H048                | 2002                | H042                | H003                | 2003                | H041                | H010                | L0770: 1        | 1.0766:         | 17077               | T065                | L078                | L5623:          |
| Gln-180                                | I.hr-201  <br> Lvs-230                             | Asn-293         | Thr-315                                 |                     |                     |                     |                     |                     |                     |                     |                    |                 |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                 |                 |                     |                     |                     |                 |
|  |  |                 |   |                     |                     |                     |                     | •                   |                     |                     |                    |                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                 |                 |                     |                     |                     |                 |
|  |  |                 | <del></del>                             |                     |                     |                     |                     |                     | <del></del>         | •                   |                    |                 |                     |                     |                     |                     | •                   |                     |                     | ٠                   |                     |                     |                 |                 |                     |                     |                     |                 |
|  | -  |                 | -                                       |                     |                     |                     |                     |                     |                     |                     |                    | <del></del>     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                 |                 |                     |                     |                     |                 |

|  |   | 106165,<br>117700,<br>117700,<br>165500,<br>169600,<br>180380,   |
|--|---|--|
|  |   | 3q24-q28   |
| L0791: 1, H0520: 1,<br>H0519: 1, H0593: 1,<br>H0689: 1, H0670: 1,<br>H0672: 1, H0696: 1,<br>S3014: 1, L0741: 1,<br>L0744: 1, L0757: 1, | L0743: 4, L0751: 4,<br>H0252: 3, L0659: 3,<br>H0586: 2, H0135: 2,<br>H00570: 2, L0438: 2,<br>H0624: 1, S0430: 1,<br>S0222: 1, H0052: 1,<br>L0471: 1, T0010: 1,<br>H0428: 1, H0616: 1,<br>H0646: 1, L0564: 1,<br>H0646: 1, L0564: 1,<br>H0646: 1, L0763: 1,<br>H0144: 1, S0126: 1,<br>H0660: 1, H0651: 1,<br>H0555: 1, L0749: 1,<br>L0758: 1 and S0194: 1. | L0777: 3, L0803: 2,<br>L0774: 2, L0602: 2,<br>L0596: 2, L0588: 2,<br>S0376: 1, H0431: 1,<br>H0427: 1, H0266: 1,<br>H0328: 1, H0615: 1,   |
|  | 7.  | Arg-49 to Leu-55, L0777: 3, L0803: Arg-61 to Cys-69, L0774: 2, L0602: 2 Arg-87 to Arg-102, L0596: 2, L0588: 2 Asn-119 to Lys-125, S0376: 1, H0431: 1 Cys-132 to Met-151, H0427: 1, H0266: 1 Ser-157 to Glu-164, H0328: 1, H0615: 1 |
|  | 3035  | 3036   |
|  | 1937  | 1 - 1155   |
|  | 098   | 861  |
| ·  | 1057219   | 1057260  |
|  | HRABO80   | HADDF30  |

| 180380,   | 600700,  | 601199,             | 601199,             | 601199,             | 601682              |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
|---|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|
| ,   | HUGOU: 1, 503/8: 1 and L0750: 1.   |                     |                     |                     |                     |                     | AR096: 4, AR089: 2, | AR033: 2, AR060: 1, | AR053: 1, AR055: 1, | AR061: 1, AR104: 1, | AR039: 0, AR052: 0 | H0052: 4, L0768: 3, | L0766: 3, L0438: 3, | L0748: 3, L0750: 3, | H0657: 2, H0341: 2, | H0484: 2, T0042: 2, | L0665: 2, H0658: 2, | L0743: 2, L0744: 2, | L0756: 2, L0777: 2, | H0556: 1, H0656: 1, | S0420: 1, H0393: 1, | L0717: 1, S0222: 1, | H0497: 1, H0486: 1, | H0013: 1, H0263: 1, | N0006: 1, L0579: 1, | • | HU394: 1, HU26/: 1, |
| Asn-187 to Glu-210, L0523: 1, L0659: Glu-235 to Thr-243, L0809: 1, L0666: | Lys-245 to Val-251, H0660!: 1, 503/8: 1<br>His-256 to Ser-268, L0750: 1. | Ser-277 to Ser-288, | Leu-303 to Glu-317, | Glu-328 to Gln-341, | Ser-350 to Leu-355, | Ser-357 to Asn-364. |                     |                     | 7                   | 7                   | 7                  |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |   |                     |
|   |  |                     |                     |                     |                     |                     | 245 - 460 3037      |                     |                     |                     |                    | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
|   |  |                     |                     |                     |                     |                     | 1057272 862         |                     |                     |                     | -                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |
|   |  |                     |                     |                     |                     |                     | HDAAS58             |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |   |                     |

|  |  | 118504,<br>118504,<br>131242,<br>139320,<br>139320,<br>139320,<br>602025,<br>602235  |
|--|--|--|
|  |  | 20q13.2-<br>q13.3  |
| H0615: 1, H0688: 1,<br>H0494: 1, H0538: 1,<br>L0769: 1, L0772: 1,<br>L0649: 1, L0804: 1,<br>L0774: 1, L0804: 1,<br>L0776: 1, L0804: 1,<br>L0776: 1, L0809: 1,<br>H074: 1, H0520: 1,<br>H0711: 1, H0690: 1,<br>L0739: 1, L0747: 1,<br>L0745: 1, L0747: 1,<br>L0786: 1, L0780: 1,<br>L0786: 1, L0780: 1,<br>H0352: 1, H0542: 1 and | H0556: 1, H0455: 1<br>and H0660: 1.                              | H0550: 3, L0751: 3,<br>S0356: 2, H0024: 2,<br>H0014: 2, H0059: 2,<br>H0661: 1, H0645: 1,<br>H0549: 1, H0052: 1,<br>H0172: 1, H0123: 1,<br>H0288: 1, H0266: 1,<br>H0288: 1, H0549: 1,<br>H0494: 1, H0649: 1,<br>H0646: 1, L0649: 1, |
|  | Thr-92 to Gln-106,<br>Val-222 to Val-227,<br>Glu-229 to Asp-245. |  |
|  | 3038   | 3039   |
|  | 3 - 737  | 3 - 1391   |
|  | 863  | 864  |
|  | 1057307  | 1057393  |
|  | HSDZG15  | HPDVY52  |

|  |                                  |                     |                     |                     |                     |                     |   |  |  |                                      |                                      |                               |                            |                               |                     |                     |                     |                     |                        |           |                      |                     |   | •                                       |   |   |  |
|--|----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|--|--|--------------------------------------|--------------------------------------|-------------------------------|----------------------------|-------------------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|----------------------|---------------------|---|---|---|---|--|
|  |                                  |                     |                     |                     |                     |                     | •                                       |  |  |                                      |                                      |                               |                            |                               |                     |                     |                     |                     |                        | ,         |                      |                     |   |   |   |   |  |
| H0658: 1, H0672: 1,<br>H0555: 1, L0439: 1, | L0747: 1, S0276: 1 and H0506: 1. | H0556: 7, H0543: 7, | H0265: 3, S0278: 3, | S0002: 3, H0445: 3, | H0657: 2, H0663: 2, | H0580: 2, S0003: 2, | H0090: 2, S0144: 2,                     | S0152: 2, S0206: 2,                    | H0542: 2, H0656: 1,                    | H0125: 1, H0351: 1,                  | H0575: 1, S0182: 1,                  | H0023: 1, H0373: 1,           | H0375: 1, H0591: 1,        | H0040: 1, H0264: 1,           | T0041: 1, T0042: 1, | S0142: 1, H0521: 1, | H0214: 1, H0436: 1, | L0750: 1, L0757: 1, | S0242: 1, H0423: 1 and | H0422: 1. | L0751: 19, L0659: 9, | H0550: 8, H0545: 6, | S0360: 5, H0620: 5,                     | H0309: 4, H0050: 4,                     | H0135: 4, L0754: 4,                     | L0747: 4, L0731: 4,                     | H0170: 3, H0253: 3,                    |
|  |                                  |                     |                     | Asp-62 to Thr-74,   | 8,                  | Ala-144 to Ser-158, | Gln-200 to Glu-205, H0090: 2, S0144: 2, | Cys-212 to Gly-217, S0152: 2, S0206: 2 | Pro-231 to Phe-238, H0542: 2, H0656: 1 | Gln-259 to Glu-264, H0125: 1, H0351: | Glu-282 to Tyr-288, H0575: 1, S0182: | Lys-300 to Asn-305, H0023: 1, | His-351 to Thr-358, H0375: | Arg-399 to Cys-407. H0040: 1, |                     |                     |                     | -                   |                        |           | Cys-24 to Gly-35,    | Ala-42 to Glu-47,   | Gin-181 to Asp-188, S0360: 5, H0620: 5, | Val-264 to Pro-270, H0309: 4, H0050: 4, | Asn-289 to Gly-294, H0135: 4, L0754: 4, | Leu-325 to Tyr-330, L0747: 4, L0731: 4, | Gly-353 to Leu-360, H0170: 3, H0253: 3 |
|  |                                  | 3040                |                     |                     |                     |                     |   |  |  |                                      |                                      |                               |                            |                               |                     |                     |                     |                     |                        |           | 3041                 |                     |   |   |   |   |  |
|  |                                  | 2 - 1252            |                     |                     |                     |                     |   |  |  |                                      |                                      |                               |                            |                               |                     |                     |                     |                     |                        |           | 327 - 1625           |                     | •                                       |   |   |   |  |
|  |                                  | 865                 |                     |                     |                     |                     |   | ٠                                      |  | •                                    |                                      |                               |                            |                               |                     |                     |                     |                     |                        |           | 998                  |                     |   |   |   |   |  |
|  |                                  | 1057478             |                     |                     |                     |                     |   |  |  |                                      |                                      |                               |                            | -                             |                     |                     |                     |                     |                        |           | 1057561              |                     |   |   |   |   |  |
|  |                                  | HHESW02             |                     |                     |                     |                     |   |  |  |                                      |                                      |                               |                            |                               |                     |                     |                     |                     |                        |           | HVVBW84              |                     |   |   |   |   |  |

| <u> </u>           |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  | <del></del>      |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------|-----------|-----------|----------------------|---------------------|------------------|-----------|-----------|----------|------------------|------------------|------------------|-----------|-------------|-----------|----------|------------------|------------------|------------------|-------------------|-----------|------------------|----------|
|                    |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  | •                |           |             |           |          |                  |                  |                  |                   |           | •                |          |
|                    |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
| ļ                  |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             | •         |          |                  |                  |                  | _                 |           |                  |          |
|                    |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|                    |                     |                     |                     |                     |                     |                     |           | ,         |           |                      |                     |                  | ,         |           |          |                  |                  |                  |           | •           |           |          |                  |                  |                  |                   |           |                  |          |
|                    |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|                    |                     |                     |                     |                     |                     | _                   |           |           |           |                      |                     |                  |           |           |          | _                | _                |                  | _         | _           |           |          | _                | _                |                  |                   |           |                  |          |
| 7:3,               | H0124: 3, L0375: 3, | H0144: 3, H0672: 3, | 30196: 3, H0619: 2, | 10586: 2, H0427: 2, | 10546: 2, H0622: 2, | H0628: 2, H0087: 2, | L0764: 2, | L0664: 2, | 9.2,      | 9:2,                 | 2: 2,               | 3: 1,            | 6: 1,     | 0:1,      | 2: 1,    | 2: 1,            | 6: 1,            | 1:1              | 4.1       | %: <u>1</u> | 3: 1,     | 3: 1     | 4: 1             | 0:1              | 0: 1,            | 8: 1,             | 6: 1,     | 2: 1,            | 3: 1,    |
| 1068               | .037                | 1067                | 1061                | 1042                | <b>H062</b>         | 1008                | 2076      | 990       | L0439: 2, | 075                  | 3019                | 990I             | 1, S0356: | , \$0300: | , S0222: | <b>H05</b> 9     | H015             | <b>H025</b>      | l, H0544: | 1, H0188:   | 1, L0053: | , H0553: | H067             | H009             | 7207             | 260               | L0806:    | .054             | L0783    |
| 3,1                | : 3, I              | 3,1                 | 3, E                | :2,1                | : 2, I              | : 2, I              | : 2, I    | 2, I      | 2,1       | 2,1                  | 2,5                 | 1, F             | 1, 5      | : 1, 5    | . 1, S   | : 1, 1           | : 1, I           | : 1, 1           | : 1, I    | : 1, I      | 1, I      | : 1, 1   | : 1, 1           | .1,              | .1.              | 1,1               | 1, I      | 1,1              | Ţ,       |
| H0024: 3, H0687: 3 | )124                | 47.                 | 196:                | )586                | 546                 | )628                | 10100: 2, | 0519: 2,  | 30028: 2, | .0758: 2, L.0759: 2, | H0343: 2, S0192: 2, | S0212: 1, H0663: | H0662:    | H0208: 1  | H0549: 1 | 10392: 1, H0592: | H0618: 1, H0196: | H0052: 1, H0251: | H0232: 1  | 10041:      | S0250: 1  | H0031: 1 | H0644: 1, H0674: | H0163: 1, H0090: | H0477: 1, L0770: | .0644: 1, L.0648: | .0662: 1, | .0776: 1, L0542: | .0546:   |
| 芦                  | Ħ                   | Ħ                   | <u>8</u>            | Ħ                   | Ħ                   | Ħ                   | 耳         | <u> </u>  | SC        | <u> </u>             | Ξ                   | 80               | 耳         | Ĭ         | 互        | 王                | 茁                | 王                | Ħ         | 苴           | <u>S</u>  | Ĭ        | Ħ                | Ħ                | H                | <u> </u>          | <u> </u>  | <u> </u>         | <u>L</u> |
| ا ا                |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           | ٠.          |           |          |                  |                  |                  |                   |           |                  |          |
| o As               |                     |                     |                     |                     | •                   |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
| 3791               |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
| Asn-379 to Asp-    | 388.                |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
| F                  | <u>n</u>            |                     |                     |                     |                     |                     |           | •         |           |                      |                     | •                |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|                    | •                   |                     |                     |                     | •                   |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|                    |                     |                     |                     |                     |                     |                     |           |           | *****     |                      |                     |                  |           |           |          |                  | ·                |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|                    |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|                    |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           | -                |          |
|                    |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
| -                  |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|                    |                     |                     |                     |                     |                     |                     | ٠         |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|                    |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|                    |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|                    |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|                    |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |
|                    |                     |                     |                     |                     |                     |                     |           |           |           |                      |                     |                  |           |           |          |                  |                  |                  |           |             |           |          |                  |                  |                  |                   |           |                  |          |

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| L0789: 1, L0666: 1,<br>L0663: 1, L0438: 1,<br>H0684: 1, H0651: 1,<br>S0044: 1, L0744: 1,<br>L0584: 1, L0485: 1,<br>L0361: 1, S0194: 1 and<br>H0008: 1. | AR039: 5, AR053: 5,<br>AR089: 4, AR060: 3,<br>AR061: 3, AR055: 2,<br>AR096: 1, AR033: 1,<br>AR104: 0<br>L0747: 4, L0777: 3,<br>L0657: 2, L0759: 2,<br>L0811: 1, H0369: 1,<br>L0021: 1, S0346: 1,<br>H0009: 1, L0637: 1,<br>L0772: 1, L0375: 1,<br>L0772: 1, L0809: 1,<br>H0659: 1, H0660: 1,<br>L0731: 1 and L0758: 1. | AR055: 5, AR060: 5,<br>AR061: 5, AR052: 4,<br>AR033: 4, AR089: 3,<br>AR053: 3, AR096: 2,<br>AR039: 2, AR104: 1<br>H0550: 9, H0651: 6,<br>S0358: 5, L0659: 5,<br>H0549: 3, H0586: 3,<br>L0662: 3, L0794: 3, |
|  | Arg-12 to Gln-25,<br>Gly-31 to Gly-38.   | His-12 to Ala-26,<br>Ser-70 to Glu-78,<br>Pro-87 to Pro-94.  |
|  | 3042   | 3043   |
|  | 1365 -   | 143 - 1945   |
|  | 867  | 898  |
|  | 1057603  | 1057797  |
|  | HEAAC39  | HSLJC80  |

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|   |   | ٠, 6           | .ee.                   | _         |            |  |                 |                 |   |                   |                    |                    |                    | _                   |
| 2,2,2,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1   | 1,<br>49: 1                               | `              | . 6                    | 3.        | 51:<br>2 : | 5: II<br>9.                                | ٦,              | ٠,٠             | <u>ئ</u> ک                              | , v,              | ۶,                 | ς,                 | 4,                 | 4,                  |
| 1, H0575:<br>2, L0744:<br>2, L0758:<br>1, H0716:<br>1, H0587:<br>1, H0687:<br>1, H0628:<br>1, H0628:<br>1, H0628:<br>1, H0628:<br>1, H0628:<br>1, L0809:<br>1, L0863:   | 0406:<br>1 L07                            | 10, AR096:     | 4, AR039:<br>4, AR039: | 4, AR104: | 3, AR061:  | L0659: 11, L0665: 11<br>0666: 9, L0752: 9. | 0731: 9, Н0623: | 0663: 7, H0658: | 0/43: /, L0/50: /<br>0662: 6. 1.0758: 6 | 3045:             | 0412:              | 0655:              | 0437               | 0747                |
| 4. 1. 1. 1. 1. 1. 1. 2. 2. 3. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.  | 1, S(<br>1 and                            |                |                        |           | ω, ;<br>   | 9: 11,<br>9:10                             | 9, H            | 7, H            | 1                                       | 6, 8              | 5, H               | 5, L               | 5, H               | . 4, L              |
| 20777: 3, H0575: 2, 20649: 2, L0744: 2, 20756: 2, L0758: 2, H0739: 1, H0716: 1, H0662: 1, H0500: 1, H0018: 1, H0687: 1, H0644: 1, H0628: 1, H0163: 1, H0100: 1, L0770: 1, L0809: 1, L0788: 1, L0663: 1, L0663: 1, L0663: 1, | H0696: 1, S0406: 1, S0390: 1 and L0749: 1 | AR052:         | 4R033.                 | AR060:    | AR055:     | L0659: 11, L0665<br>.0666: 9. L0752: 9     | 0731            | 0663            | 0.45                                    | 0759: 6, S0045: 5 | S0046: 5, H0412: 5 | 20776: 5, L0655: 5 | .0779: 5, H0437: 4 | H0457: 4, L0747: 4, |
| <u> <br/>                                     </u>  | E S                                       | <b>∀. &lt;</b> | <u>₹ ∢</u>             | <u>∢</u>  | ⋖_         |  |                 | <u>, , ,</u>    |   |                   | S                  |                    |                    | 1                   |
|   |   |                |                        |           |            |  |                 | •               |   |                   |                    |                    |                    |                     |
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|   |   | 4              |                        |           |            |  | ,               |                 |   |                   | -                  |                    |                    |                     |
|   |   | 3044           |                        |           |            |  |                 |                 |   |                   |                    |                    |                    |                     |
|   |   | 332 - 934      |                        |           |            |  |                 |                 |   |                   |                    |                    |                    |                     |
|   | -   | 332            |                        |           |            | ٠  |                 | •               |   |                   |                    |                    |                    |                     |
|   |   | 698            |                        |           |            |  |                 |                 |   |                   |                    |                    |                    | ,                   |
|   |   |                |                        |           |            | •  |                 |                 |   | <u> </u>          |                    |                    |                    |                     |
|   |   | 1057842        |                        |           |            |  |                 |                 |   |                   |                    |                    |                    |                     |
|   |   | 100            |                        |           |            |  |                 |                 |   |                   |                    |                    |                    |                     |
|   |   | 212            |                        |           |            |  |                 |                 |   |                   |                    |                    |                    |                     |
|   |   | HEOAD12        |                        |           |            |  |                 |                 |   |                   |                    |                    |                    |                     |
|   |   | E              |                        |           |            |  |                 |                 |   |                   |                    |                    |                    |                     |

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|---------------------|---------------------|--------------------|--------------------|---------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------|
|                     |                     |                    |                    |                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                 |
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| _                   |                     |                    |                    |                     |                    |                    | ,                  |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  | _               |
|                     |                     |                    |                    |                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                 |
|                     |                     |                    |                    |                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                 |
| Ŀ                   |                     |                    |                    |                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     | _                  |                  |                  |                  |                  |                  |                  |                  |                  |                 |
| _                   | ·                   | ~~ <u>`</u>        | 33                 |                     | ^                  | ~,                 | <b>~</b> `         | ર્જ                 | ລຳ                  | ર્ય                 | ລົ                  | ~î                  | ຸລາ                 | ລົ                 | ~5                  | ر<br>ر              | ٠.                  | ລົ                  | ٠.5                 | ر.                 | <del>_</del> ,   | 1,               | <del>_</del>     | •                | ·                |                  | ·                | 1,               | 1,              |
| 05.                 | 11:3                | 66:3               | 56:                | .0667: 3, L0764: 3, | 0794: 3, L0803: 3, | 88:                | .0599: 3, H0543: 3 | 57:                 | 80:2                | 139:                | .0471: 2, L0483: 2, | H0413: 2, S0344: 2, | .0598: 2, L0763: 2, | 0771: 2, L0775: 2, | .0809: 2, S0374: 2, | <del>78</del>       | 30:2                | 36: 7               | 28:2                | .0751: 2, L0745: 2 | 70.              | 583:             | <del>1</del> 02: | 4                | .72              | 51:              | 31:              | H0592: 1, H0333: | 535:            |
| 1,00                | H                   | H02                | HOC                | L07                 | 108                | L05                | H05                | HO                  | H05                 | H04                 | 2                   | S03                 | 1007                | 1.07               | <b>S03</b>          | , H00               | S03                 | H06                 | <b>S00</b>          | 107                | .0755: 2, H0170: | H0171: 1, H0583: | H0662: 1, H0402: | <b>S04</b>       | H07              | H03              | H04              | , HO             | H0              |
| 2.4                 | 6:3,                | 2:3,               | 3: 3,              | 7:3,                | 4: 3,              | 6:3,               | 9:3,               | 4:2,                | 6: 2,               | 3:2                 | 1:2,                | 3:2                 | 8:2,                | 1: 2,              | 9:2,                | 0:2                 | 8: 2,               | 6: 2,               | 4: 2,               | 1:2,               | 5:2,             | 1:1              | 22: 1            | 2: 1,            | 0:1,             | 0:1,             | 8: 1,            | 2: 1             | 36: 1           |
| H0422: 4, 1,0005: 3 | S0376: 3, H0411: 3, | S0222: 3, H0266: 3 | H0553: 3, H0056: 3 | 990                 | 079                | H0436: 3, L0588: 3 | 059                | H0624: 2, H0657: 2, | S0116: 2, H0580: 2, | H0013: 2, H0439: 2, | 747                 | 1641                | .059                | 7207               | 080                 | H0670: 2, H0648: 2, | S0328: 2, S0330: 2, | S0136: 2, H0696: 2, | S0404: 2, S0028: 2, | 2075               | 2075             | H017             | H066             | S0442: 1, S0444: | S0360: 1, H0722: | S0300: 1, H0351: | S0278: 1, H0431: | H059             | H0486: 1, H0635 |
| ľ                   | <u> </u>            | <u> </u>           |                    | _                   | _                  | <u></u> L          |                    |                     | <u> </u>            |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                  |                  | <u></u>          |                  |                  |                  |                  |                  |                 |
|                     |                     |                    |                    |                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  | •                |                 |
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|                     |                     |                    |                    |                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                  |                  | •                |                  |                  |                  |                  |                  |                 |
| L                   |                     |                    |                    | •                   |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                 |
|                     |                     |                    |                    | •                   |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                 |
| L                   |                     |                    |                    | ı                   |                    |                    |                    |                     |                     |                     |                     | •                   |                     |                    |                     |                     |                     |                     |                     |                    | _                |                  |                  |                  |                  |                  |                  |                  |                 |
|                     |                     |                    |                    |                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                 |
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| H                   |                     |                    |                    |                     |                    |                    |                    |                     |                     |                     |                     |                     | -                   |                    |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  | •                |                  |                  |                 |
| L                   |                     |                    |                    |                     |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     | •                   |                     |                     |                    | ٠                |                  |                  |                  |                  |                  |                  |                  | _               |
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|                     |                     |                    |                    | •                   |                    |                    |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                    |                  |                  |                  |                  |                  |                  |                  |                  |                 |
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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------------|-------------------|-------------------|-------------------|---------------------|
| H0318: 1, S0474: 1, | H0434: 1, H0251: 1, | H0150: 1, H0024: 1, | H0594: 1, H0179: 1, | H0687: 1, H0119: 1, | H0644: 1, H0628: 1, | S0036: 1, H0038: 1, | H0634: 1, T0067: 1, | H0433: 1, H0269: 1, | H0100: 1, L0065: 1, | L0369: 1, L0770: 1, | L0648: 1, L0521: 1, | L0766: 1, L0804: 1, | L0650: 1, L0651: 1, | L0632: 1, L0806: 1, | L0517: 1, L0518: 1, | L0783: 1, L0647: 1, | L0664: 1, H0693: 1, | H0547: 1, H0659: 1, | S0380: 1, H0710: 1, | S0190: 1, H0727: 1, | L0754: 1, L0756: 1, | L0592: 1, H0667: 1, | H0136: 1 and S0276: 1. |                 |                   |                   |                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | 5.04-5              |                     |                     | ı                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | Leu-1 to Lys-7, | Arg-27 to Glu-33, | Ala-43 to Gly-66, | Ser-78 to Ser-84, | Gly-111 to Val-118, |
|                     |                     |                     |                     |                     |                     | ,                   |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 3045            |                   |                   |                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | -                      | 214 - 1272      |                   |                   |                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 870             |                   |                   |                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                        | 1057880         |                   |                   |                   |                     |
|                     |                     |                     |                     |                     | ,                   |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                        | HVVBT41         |                   |                   |                   |                     |

|   | L0768: 7, L0750: 6,<br>L0783: 5, H0687: 4,<br>H0428: 4, L0770: 4,<br>H0672: 4, H0031: 3,<br>L0767: 3, L0776: 3,<br>L0767: 3, L0776: 3,<br>L0749: 3, L0755: 3,<br>L0731: 3, L0759: 3,<br>L0608: 3, H0333: 2,<br>H0046: 2, H0609: 2,<br>H0059: 2, L0809: 2,<br>H0547: 2, L0742: 2,<br>L0772: 2, H0624: 1,<br>H0686: 1, H0656: 1,<br>L0778: 1, H0662: 1,<br>H0550: 1, H0441: 1,<br>H0550: 1, H0441: 1, |
|---|---|
| Glu-140 to Lys-145,<br>Lys-163 to Asp-168,<br>Lys-189 to Phe-197,<br>Arg-257 to Leu-264,<br>Gln-285 to Asp-292,<br>Gly-298 to Ala-308,<br>Arg-314 to Glu-323,<br>Gly-329 to Gly-338,<br>Ser-343 to Leu-353. |   |
|   | 3046  |
|   | 3 - 659   |
|   | 871   |
|   | 1057915   |
|   | HAZAE42   |

|  | 158900,<br>229000,<br>264900   |                     |
|--|--|---------------------|
|  | 4q35   |                     |
| H0421: 1, H0544: 1,<br>H0123: 1, L0471: 1,<br>H0012: 1, H0356: 1,<br>H0213: 1, H0087: 1,<br>H0494: 1, H0509: 1,<br>H0646: 1, S0210: 1,<br>L0763: 1, L0371: 1,<br>L0774: 1, L0625: 1,<br>L0774: 1, L0625: 1,<br>L0774: 1, L0637: 1,<br>H0691: 1, H0144: 1,<br>H0691: 1, H0520: 1,<br>H0691: 1, H0570: 1,<br>S0328: 1, S0378: 1,<br>S0380: 1, L0777: 1,<br>L0780: 1, L0753: 1, | L0439: 9, H0550: 6, S0366: 6, S0364: 4, H0644: 3, S0358: 2, H0549: 2, H0645: 1, S0222: 1, H0370: 1, H0050: 1, H0039: 1, H0032: 1, H0212: 1, H0379: 1, L0438: 1 and S0044: 1.   | H0574: 5, S0126: 4, |
|  | Phe-1 to Cys-8, L0439: 9, H0550 Ala-10 to Gly-23, S0366: 6, S0364: 4 Glu-129 to Phe-135, H0549: 2, H0645: Ile-155 to Gln-160, S0222: 1, H0370: Ser-193 to Thr-199, H0050: 1, L0471: Asp-214 to Gly-226, S0362: 1, H0039: Asp-236 to Gly-245, H0032: 1, H0212: Ala-283 to Arg-288, H0379: 1, L0438: Ala-322 to Asp-331. S0044: 1. | Arg-20 to Arg-26,   |
|  | 3047   | 3048                |
|  | 3 - 1019   | 1 - 987             |
|  | 872  | 873                 |
|  | 1057948  | 1057958             |
|  | HPRBN60  | HOVCZ68             |

|   |  | 600467,<br>600882  |
|---|--|--|
|   |  | 3q13.1-<br>q13.2   |
| L0748: 4, L0777: 4,<br>L0759: 4, T0039: 3,<br>H0428: 3, H0644: 3,<br>S0194: 3, H0393: 2,<br>H0331: 2, H0632: 2,<br>L0805: 2, L0776: 2,<br>H0436: 2, L0776: 2,<br>H0661: 1, H0685: 1,<br>H0661: 1, S0132: 1,<br>H0546: 1, H0011: 1,<br>H0033: 1, H0011: 1,<br>H0038: 1, H0551: 1,<br>C0794: 1, L0517: 1,<br>L0790: 1, L0791: 1,<br>L0790: 1, L0791: 1,<br>L0665: 1, H0144: 1,<br>H0689: 1, S0152: 1, | S0192: 1, S0276: 1 and S0196: 1.             | L0777: 6, L0666: 3,<br>H0648: 3, H0672: 3,<br>L0747: 3, H0685: 2,<br>S0376: 2, H0553: 2,<br>S0440: 2, H0529: 2,<br>L0775: 2, L0788: 2,<br>L0665: 2, S0152: 2,  |
| Ser 47 to Thr-59, L0748: 4, L0777: 4, Val-83 to Cys-91, L0759: 4, T0039: 3, Asn-94 to Arg-100, H0428: 3, H0644: 3, 126, 126, 126, 126, 126, 126, 126, 126   | <u>,                                    </u> | Asp-17 to Gly-23, L0777: 6, L0666: 3<br>Lys-89 to Asp-94, H0648: 3, H0672: 3,<br>Lys-129 to Asp-134, L0747: 3, H0685: 2,<br>Leu-195 to Glu-204. S0376: 2, H0553: 2,<br>S0440: 2, H0529: 2,<br>L0775: 2, L0788: 2,<br>L0665: 2, S0152: 2, |
|   |  | 3049   |
|   |  | 2 - 1120   |
|   |  | 874  |
|   |  | 1057979  |
|   |  | Н6ЕDF71  |

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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                        | 17                    | ٠                    |                     |                     |                     |                     |  |   |                     |
| L0599: 2, H0624: 1, | H0265: 1, H0222: 1, | H0713: 1, H0638: 1, | S0354: 1, S0360: 1, | S0408: 1, H0370: 1, | H0559: 1, H0486: 1, | H0581: 1, H0567: 1, | H0083: 1, S0003: 1, | H0674: 1, H0090: 1, | L0475: 1, S0438: 1, | S0002: 1, L0646: 1, | L0521: 1, L0766: 1, | L0651: 1, L0783: 1, | L0663: 1, S0374: 1, | H0519: 1, H0658: 1, | H0696: 1, S0044: 1, | S0406: 1, L0750: 1, | L0755: 1, H0445: 1, | L0366: 1, H0667: 1, | S0276: 1, H0543: 1, | H0423: 1 and H0506: 1. | L0499: 33, L0493: 25, | L0514: 10, H0484: 8, | H0620: 6, L0769: 6, |                     | L0766: 5, L0515: 5, | L0747: 5, L0779: 5, | H0543: 5, H0559: 4,                    | Pro-257 to Lys-269, H0618: 4, H0617: 4, | H0087: 4, S0422: 4, |
|                     |                     |                     |                     |                     | ~                   |                     | •                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                        | Gly-28 to Ser-36,     | Trp-38 to Pro-60,    | Pro-98 to Thr-104,  | Pro-113 to Tyr-118, | Phe-133 to Gly-140, | Pro-186 to Leu-192, | Glu-239 to Gly-246, H0543: 5, H0559: 4 | Pro-257 to Lys-269,                     | Lys-273 to Lys-279. |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 3050                  |                      |                     |                     |                     |                     |  |   |                     |
|                     |                     |                     |                     |                     | •                   |                     | <del>,</del>        |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                        | 1 - 855               |                      |                     |                     |                     |                     |  |   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 875                   |                      |                     |                     |                     |                     |  |   |                     |
|                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                        | 1058001               |                      |                     | ٠                   |                     |                     |  |   |                     |
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| L0497: 4, L0509: 4 | S0376: 3, H0546: 3, | H0424: 3, H0551: 3 | .0504: 3, H0686: 2, | H0545: 2, H0571: 2, | H0412: 2, L0507: 2, | .0773: 2, L0512: 2, | 126:2    | .0592: 2, H0136: 2 | 0170: 1          | 0556: 1          | 0341:1  | H0483: 1, H0663: 1 | H0305: 1, H0638: 1 | S0420: 1, S0444: 1, | 0438: 1          | 0257: 1          | 0109: 1          | H0253: 1    | H0544: 1    | 0288: ]          | 0213: 1 | 0163: 1          | 0616: ]          | 0041: 1          | 0763: 1          | 3639: 1          | 0644: 1          | 3662: 1          | 5564: 1          |
| 7: 4, L(           | 6: 3, H(            | 4: 3, H            | 4: 3, H             | 5: 2, H             | 2: 2, L             | 3: 2, L(            | 3: 2, S( | 2: 2, H            | H0624: 1, H0170: | H0171: 1, H0556: | 2: 1, H | 3: 1, H            | 5: 1, H            | 0: 1, S(            | S0408: 1, H0438: | H0333: 1, H0257: | T0039: 1, T0109: | H0013: 1, H | H0251: 1, H | H0083: 1, H0288: | 2: 1, H | H0068: 1, H0163: | H0634: 1, H0616: | H0100: 1, T0041: | H0641: 1, L0763: | .0638: 1, L0639: | .0646: 1, L0644: | .0648: 1, L0662: | .0768: 1, L5564: |
| L049               | S037                | H042               | L050                | H054                | H041                | 1077                | 1078     | L059               | H062             | H017             | S034    | H048               | H030               | <b>S042</b>         | S040             | H033             | T003             | H001        | H025        | H008             | H062    | H006             | H063             | H010             | H064             | 1.063            | L064             | 1.064            | T076             |
|                    |                     |                    |                     |                     |                     |                     |          | •                  |                  |                  |         |                    |                    |                     |                  |                  |                  |             |             |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
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|                    |                     |                    |                     |                     |                     |                     |          |                    |                  |                  |         |                    |                    |                     |                  |                  | -                |             |             |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
|                    |                     |                    |                     |                     |                     |                     |          |                    |                  |                  |         |                    |                    |                     |                  |                  |                  |             |             |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| _                  |                     |                    |                     | •                   |                     |                     |          |                    |                  | <u>,</u> -       |         | .,                 |                    |                     |                  |                  |                  |             | <del></del> | <del></del>      |         |                  |                  |                  |                  |                  |                  |                  |                  |
| _                  |                     |                    |                     |                     |                     |                     | -        |                    |                  |                  |         |                    |                    |                     |                  |                  |                  |             |             |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
|                    |                     |                    |                     |                     |                     |                     |          |                    |                  |                  |         |                    |                    |                     |                  |                  |                  |             |             |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
|                    |                     |                    |                     |                     |                     | ·                   |          |                    |                  |                  |         |                    |                    |                     |                  |                  |                  |             |             |                  |         | <u> </u>         |                  |                  |                  |                  |                  |                  |                  |
|                    |                     |                    |                     |                     |                     |                     |          |                    |                  |                  |         |                    |                    |                     |                  |                  |                  |             |             |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
|                    |                     |                    |                     |                     |                     |                     |          |                    |                  |                  |         |                    |                    |                     |                  |                  |                  |             |             |                  |         |                  | ٠                |                  |                  |                  |                  |                  |                  |

| L0498: 1, L0806: 1,<br>L0653: 1, L0655: 1,<br>L0606: 1, L0629: 1,<br>L0510: 1, L0511: 1,<br>L0656: 1, L0665: 1,<br>S0052: 1, H0690: 1,<br>H0670: 1, S0328: 1,<br>H06539: 1, S0152: 1,<br>H0521: 1, S0406: 1,<br>L0742: 1, L0748: 1,<br>L0758: 1, S0436: 1,<br>L0057: 1, H0542: 1, | L0699. 1 and figure. 1.  H0547: 14, H0519: 13, L0803: 12, L0754: 12, H0543: 12, L0794: 10, H0423: 10, H0521: 9, L0748: 9, H0013: 8, L0805: 8, H0046: 7, L0439: 7, L0758: 7, L0599: 7, L0758: 7, L0599: 7, L0471: 6, L0666: 6, L0663: 6, L0731: 6, H0553: 5, H0040: 5, S0422: 5, S0002: 5, H0529: 5, L0659: 5, H0435: 5, L0752: 5, L0750: 5, |
|---|---|
|   | Glu-20 to Leu-35,<br>Asp-48 to Gly-54.  |
|   | 3051  |
|   | 3522 -<br>1090  |
|   | 876   |
|   | 1058059   |
|   | HVVBH81   |

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| L0608: 5            | S0358: 4            | L0717: 4            | H0486: 4            | H0038: 4     | L0770: 4            | L0766: 4            | L0774: 4            | L0519: 4            | L0747: 4            | L0588: 4                               | H0657:              | H0661: 3            | H0592:             | H0083:             | H0674:              | L0598: 3            | L0769: 3             | L0649: 3            | L0527: 3            | L0665: 3            | H0520:              | L0602: 3            | S0028: 3            | L0749: 3            | H0136: 3            | H0624:              | S6024: 2            | H0381:              | S0418: 2            |
| L0591: 5, L0608: 5, | H0170: 4, S0358: 4, | S0360: 4, L0717: 4, | S0222: 4, H0486: 4, | 0318: 4,     | H0494: 4, L0770: 4, | .0761: 4, L0766: 4, | .0804: 4, L0774: 4, | .0809: 4, L0519: 4, | S0406: 4, L0747: 4, | 10445: 4, L0588: 4,                    | H0717: 3, H0657: 3, | 30212: 3, H0661: 3, | 10580: 3, H0592: 3 | H0587: 3, H0083: 3 | 10428: 3, H0674: 3, | 10560: 3, L0598: 3, | .0369: 3, L.0769: 3, | ,0646: 3, L0649: 3, | .0776: 3, L0527: 3, | .0790: 3, L0665: 3, | H0144: 3, H0520: 3, | S0380: 3, L0602: 3, | H0522: 3, S0028: 3, | .0740: 3, L0749: 3, | .0756: 3, H0136: 3, | H0506: 3, H0624: 2, | H0171: 2, S6024: 2, | H0583: 2, H0381: 2, | H0662: 2, S0418: 2, |
|                     | <u>, E</u>          | S                   | ·                   | <u> </u>     | <u> </u>            | ᆜ                   | <u> </u>            | <u> </u>            | <u>.</u>            | <u> </u>                               | <u> </u>            | S                   | <u>II</u>          | <u> </u>           | 五                   | <u> </u>            | <u> </u>             | <u>. —</u>          | <u>, — 1</u>        | <u>.</u>            | <u> </u>            | S                   | <u> </u>            | 브                   |                     | <u> </u>            | <u>II</u>           | <u>;=</u>           | Ξ                   |
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|                     | -                   |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                      |                     |                     |                  |  |                  |                  |                    |                  |
| 2,                  | ų                   | 2,                  | . 7                 | 2,                  | ų                   | 4                   | 4                   | 4                   | <b>6</b>            | 2,                  | 2,                  | ري (                | ر<br>ر              | 2,                   | 7,                  | 2,                  | 2,                  | ર્લ                 | ત્                  | 2,                  | 4                    | ર્ય                 | ٤,                  | 4                | <u>,                                    </u> | <b>1</b> ,       | L,               | 1,                 | 1,               |
| S0420: 2, S0356: 2, | S0476: 2, H0619: 2, | H0431: 2, H0333: 2, | T0109: 2, H0075: 2, | H0599: 2, H0581: 2, | H0052: 2, N0006: 2, | H0179: 2, T0023: 2, | H0644: 2, H0412: 2, | H0100: 2, H0561: 2, | H0641: 2, S0144: 2, | S0344: 2, H0538: 2, | S0426: 2, L0500: 2, | .0638: 2, L0372: 2, | .0497: 2, L0650: 2, | .0664: 2, L.0438: 2, | J0352: 2, S0126: 2, | H0660: 2, H0648: 2, | H0672: 2, H0436: 2, | S3014: 2, L0786: 2, | .0779: 2, L0755: 2, | .0759: 2, L0362: 2, | .0361: 2, L.0601: 2, | S0026: 2, H0667: 2, | S0192: 2, H0542: 2, | H0422: 2, L0600: | H0556: 1, T0002:                             | H0159: 1, S0114: | S0134: 1, H0650: | H0656: 1, S0116: 1 | S0001: 1, H0484: |
| 0: 2, S             | 6: 2, H             | 1: 2, F             | 9: 2, F             | 9: 2, F             | 2:2,1               | 9:2,7               | 4: 2, I             | 0: 2, I             | 1:2,5               | 4: 2, E             | 6: 2, L             | 8: 2, I             | 7:2,1               | 4. 2, I              | 2: 2, S             | 0: 2, I             | 7. 2, I             | 4: 2, I             | 9: 2, I             | 9: 2, I             | 1:2,1                | 6: 2, F             | 2: 2, E             | 2: 2, I          | 6: 1, 7                                      | 9: 1, 5          | 4: 1, F          | 6: 1, 5            | 1: 1, F          |
| S042                | <b>S047</b>         | H043                | T010                | H059                | H005                | H017                | H064                | H010                | H064                | <b>S</b> 034        | <b>S04</b> 2        | 1063                | 1,049               | 1066                 | L035                | H066                | 190H                | S301                | 107                 | L075                | L036                 | <b>S00</b> 2        | S019                | H042             | H055   | H015             | S013             | H065               | 800              |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                      |                     |                     |                  |  |                  |                  |                    |                  |
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| <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                      | <del></del>         | <del></del> -       |                     |                     |                     |                     |                      |                     |                     |                  |  |                  |                  |                    |                  |
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|           |                  |        |          |                     |       | <u>.</u>            |             |          |          |                     |             |             |       |                     |                  |                  |                  |                    |          |                     |          |       |       |                  |                  |                  | -                |                     | $\neg$             |
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|           |                  | •      |          |                     |       |                     |             |          |          |                     |             |             |       |                     |                  |                  |                  |                    |          |                     |          |       |       |                  |                  |                  |                  |                     |                    |
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| 8: 1,     | 8: 1.            | 2: 1,  | 4: 1,    | S0408: 1, S0410: 1, | 37: 1 | S0007: 1, S0045: 1, | 0:1,        | 1: 1,    | 0.1,     | H0441: 1, H0404: 1, | 74: 1       | 9: 1,       | 6: 1, | H0069: 1, H0427: 1, | 1: 1,            | 75: 1            | 0: 1,            | 5: 1,              | 9: 1,    | H0251: 1, H0309: 1, | 8: 1,    | H: 1, | 52: 1 | 20:1             | 7.1              | 14: 1            | 11: 1,           | H0355: 1, H0510: 1, | 77: 1,             |
| 1, H0458: | H063             | 400    | 46       | 3041                | H063  | 900                 | <b>3014</b> | 1041     | 1055     | H040                | H057        | <b>T003</b> | .058  | H042                | 2002             | H057             | S001             | 010                | 3008     | H03(                | .073     | L004  | H05   | H062             | H000             | H00              | S005             | H05                 | 1026               |
| : 1,]     | : 1,]            | : 1, § | :1, S    | . I, S              | . 1,  | : 1, S              | : 1, §      | : 1, 1   | : 1, F   | : 1,                | . 1, ]      | .1.         | : 1,1 |                     | 1,1              | 1.               | F. 1,            | : 1, I             | .1,5     | : 1,                | <u>.</u> | ): 1, |       | <u>_</u> ;       | <br>             | 7: 1,            | i: 1,            | 5: 1,               | : 1,1              |
| H0589: 1  | H0459: 1, H0638: | 2005   | 3376     | 3408                | 0489  | 7000                | 3046        | 0476     | 3278     | 144                 | 090         | 0485        | 946   | 9900                | S0280: 1, L0021: | H0098: 1, H0575: | H0004: 1, S0010: | S0346: 1, L0105: 1 | 0474     | 0251                | 0115     | 0530  | 5000  | H0172: 1, H0620: | H0199: 1, H0024: | H0057: 1, H0014: | H0051: 1, S0051: | 0355                | S6028: 1, H0267: 1 |
| H         | Ħ.               | ı      | <u>X</u> | <u>X</u>            | H     | <u> </u>            | Š           | <u>고</u> | <u> </u> | H                   | H           | 耳           | Ĕ     | Ξ                   | Ñ                | 王                | H                | <u> </u>           | <u> </u> | 프                   | Ē        | 工     | 王     | 王                | H                | 프                | <u> </u>         | 프                   | Š                  |
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| S0318: 1, S0316: 1, | H0687: 1, S0003: 1, | H0328: 1, H0039: 1, | H0622: 1, L0194: 1, | H0030: 1, H0031: 1, | L0142: 1, H0617: 1, | H0169: 1, L0455: 1, | H0124: 1, H0316: 1, | H0090: 1, H0591: 1, | H0551: 1, H0488: 1, | H0413: 1, T0004: 1, | T0041: 1, T0042: 1, | L0475: 1, H0625: 1, | S0370: 1, S0464: 1, | S0440: 1, H0509: 1, | S0150: 1, H0130: 1, | S0208: 1, UNKWN: 1, | L0520: 1, L0763: 1, | L0631: 1, L0637: 1, | L5575: 1, L0641: 1, | L0771: 1, L0773: 1, | L0648: 1, L0521: 1, | L0662: 1, L0767: 1, | L0775: 1, L0378: 1, | L0806: 1, L0606: 1, | L0661: 1, L0657: 1, | L0542: 1, L0384: 1, | L0528: 1, L0647: 1, | L0367: 1, L0787: 1, | L0789: 1, L0532: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|   | 139330,<br>139360,<br>150250,<br>164500,<br>182280,<br>227646,<br>261510,<br>600163,<br>600971,<br>601154,<br>601226,<br>601267,  |
|   | 3p23-p21  |
| H0697: 1, H0702: 1,<br>H0699: 1, S0374: 1,<br>H0723: 1, H0689: 1,<br>H0682: 1, H0659: 1,<br>H0658: 1, H0670: 1,<br>S0328: 1, H0670: 1,<br>H0710: 1, H0696: 1,<br>H0215: 1, H0631: 1,<br>L0751: 1, L0777: 1,<br>L0751: 1, L0777: 1,<br>S0031: 1, S0260: 1,<br>L0686: 1, H0707: 1,<br>S0434: 1, S0436: 1,<br>L0480: 1, L0589: 1,<br>L0605: 1, L0595: 1 and<br>S0011: 1. |   |
|   | Gly-6 to Gly-15,<br>Pro-17 to Leu-22,<br>Trp-25 to Leu-70,<br>Asp-72 to Val-86,<br>Asp-151 to Asn-<br>170,<br>Ala-183 to Gln-198,<br>Pro-221 to Pro-227,<br>Pro-272 to Gly-244,<br>Pro-272 to Gly-281,<br>Pro-304 to Asp-318. |
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| ): 2,               | . 2                 | 2,                  | 2,                   | .;<br>2             | 3,        | . 2,                | 3:2,                | F. 2,               | : 1,             | : 1,         | 1: 1,              | 5: 1,    | 7: 1,              | 6: 1,       | 6: 1,     | 8: 1,              | 5: 1,         | 4: 1,              | 1:1,     | 1: 1,            | 3: 1,            | 5: 1,            | 7: 1,            |                  | 1:1        | . 1,         | <u>.</u> :       | 1: 1;            | <u></u>          |
| H0169: 2, H0090: 2, | H0413: 2, S0002: 2, | .0372: 2, L0363: 2, | .0768: 2, L.0766: 2, | S0374: 2, L0438: 2, | L0602: 2, | .0743: 2, L0750: 2, | .0780: 2, H0423: 2, | H0422: 2, S0424: 2, | H0265: 1, S0212: | 0360         | H0733: 1, H0351: 1 | 0586     | H0635: 1, H0097: 1 | 1, H0546: ] | l, H0266: | H0615: 1, H0428: 1 | 1.0055:       | H0673: 1, H0124: 1 | , H0591: | H0040: 1, H0551: | H0488: 1, H0623: | H0561: 1, S0306: | S0438: 1, H0647: | S0344: 1, H0529: | L.0763: 1  | .69L0T       | .0637: 1, L0761: | .0646: 1, L0803: | .0375: 1, L0651: |
| 2, H                | 2, S                | 2, L                | 2, L                 | 2, L                | 2, L      |                     | 2, H                | 2, S                | 1, S             | 1, S(        | 1, H               | 1, L     | 1, H               | 1, H        |           | 1, E               |               | 1, H               | 1, E     | 1, E             | 1, E             | 1, S             | 1, H             | 1, H             | 1, L       | 1, L         | 1, L             | 1, L             | 1, L             |
| 169:                | 413:                | 372:                | 768:                 | 374:                | H0547: 2, | 743:                | 780:                | 422:                | 265:             | <del>4</del> | 733:               | 270:     | 635:               | H0421: 1    | H0399:    | 615:               | H0553: 1,     | 673:               | H0708: 1 | 040              | 488:             | 561:             | 438:             | 344:             | 0506: 1, 1 | .0770: 1, ]  | 637:             | 646:             | 375:             |
| 邑                   | 丑                   | 9                   | 2                    | <u>S0</u>           | 丑         | <u>2</u>            | <u>2</u>            | H                   | H                | <u> </u>     | H<br>H             | <u>H</u> | 丑                  | <u> </u>    | 丑         | 모                  | 丑             | 丑                  | 田        | 丑                | 丑                | 丑                | Š                | <u>S</u> 0       | 2          | 2            | <u> </u>         | <u> </u>         | 음                |
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| <u> </u>            |                     |                     |                      |                     |           |                     |                     |                     |                  |              | _                  |          |                    |             |           |                    |               |                    |          |                  |                  |                  |                  |                  |            | <del>.</del> |                  |                  |                  |
| •                   |                     |                     |                      |                     |           |                     |                     |                     |                  |              |                    |          |                    |             |           | n                  |               |                    |          |                  |                  |                  |                  |                  |            |              |                  |                  |                  |
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|   | 138190,<br>254210,<br>271900,<br>600179,<br>601202,<br>601777  |
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|   | 17p13  |
| L0776: 1, L0659: 1,<br>L0663: 1, L0666: 1,<br>L0665: 1, L0664: 1,<br>L0665: 1, H0144: 1,<br>H0659: 1, H0682: 1,<br>H0658: 1, H0670: 1,<br>S0330: 1, S0380: 1,<br>H0696: 1, S0146: 1,<br>H0696: 1, L0744: 1,<br>S0277: 1, L0744: 1,<br>S0260: 1, H0445: 1,<br>H0707: 1, L0595: 1,<br>L0366: 1, S0011: 1,<br>H0668: 1, H0543: 1,<br>L0697: 1, S0398: 1,<br>S0452: 1 and H0352: 1. | S0408: 20, L0751: 11,<br>S0358: 8, S0442: 5,<br>S0444: 5, L0775: 5,<br>L0776: 5, S0440: 4,<br>L0659: 4, L0666: 4,<br>L0755: 4, L0596: 4,<br>S0356: 3, S0376: 3,<br>L0771: 3, L0768: 3,<br>L0774: 3, L0743: 3,<br>L0748: 3, H0550: 2,<br>L0373: 2, L0372: 2,<br>L0665: 2, S0374: 2,<br>H0684: 2, H0648: 2,                                  |
|   | Pro-1 to Ser-6, S0408: 20, L0751: Pro-25 to Cys-31, S0358: 8, S0442: 5, Arg-142 to Lys-150, S0444: 5, L0775: 5, Pro-223 to Arg-232. L0776: 5, S0440: 4, L0659: 4, L0666: 4, L0755: 4, L0596: 4, S0356: 3, S0376: 3, L0774: 3, L0748: 3, L0774: 3, L0743: 3, L0774: 3, L0743: 2, L0373: 2, L0372: 2, L0665: 2, S0374: 2, H0684: 2, H0648: 2 |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                      |                     |                     |                     |                     |  |                     |                     |                     |                     |
| H0672: 2, S0392: 2, | L0750: 2, L0752: 2, | L0599: 2, H0295: 1, | S0360: 1, S0410: 1, | S0132: 1, H0549: 1, | H0574: 1, L0021: 1, | H0590: 1, H0085: 1, | H0204: 1, H0150: 1, | H0039: 1, H0617: 1, | H0130: 1, L0764: 1, | L0773: 1, L0648: 1, | L0653: 1, L0657: 1, | L0783: 1, L0383: 1, | L0519: 1, L0791: 1, | L0792: 1, L0663: 1, | H0435: 1, H0659: 1, | H0670: 1, H0696: 1, | S0404: 1, S0406: 1, | L0777: 1, L0759: 1 and | S0434: 1. | H0618: 10, L0809: 7, | H0713: 3, H0619: 3, | H0052: 3, S0126: 3, | L0748: 3, L0754: 3, |                     | H0716: 2, H0550: 2,                    | H0392: 2, H0253: 2, | H0687: 2, H0040: 2, |                     | L0800: 2, L0764: 2, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Ala-3 to Val-8,      | Ser-97 to Leu-104,  | Asp-106 to Thr-113, | Ala-124 to Ser-129, | Pro-136 to Gly-152, | Pro-156 to Leu-167, H0716: 2, H0550: 2 | His-176 to His-182, | Thr-188 to Ser-194, | Pro-200 to Tyr-205, | Arg-208 to Glu-214, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                        | ٠         | 3054                 |                     |                     |                     |                     |  |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1 - 765              | ,                   |                     |                     |                     |  |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     | ·                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 879                  |                     |                     |                     |                     | •                                      |                     |                     |                     | •                   |
|                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1058250              |                     |                     |                     |                     |  |                     |                     |                     | •                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                        |           | HOCPT58              |                     |                     | ,                   |                     |  |                     |                     |                     |                     |

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|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| L0774: 2, H0660: 2,                     | S0378: 2, S3014: 2, | L0751: 2, L0749: 2, | L0779: 2, L0758: 2, | L0759: 2, H0295: 1, | H0583: 1, S0212: 1, | H0484: 1, H0255: 1, | S0442: 1, S0358: 1, | S0444: 1, S0360: 1, | H0549: 1, H0333: 1, | L0622: 1, H0486: 1, | T0060: 1, H0427: 1, | L0021: 1, H0194: 1, | H0309: 1, H0546: 1, | H0050: 1, L0471: 1, | H0051: 1, S0388: 1, | Ĺ | H0252: 1, H0428: 1, | H0039: 1, H0553: 1, | H0163: 1, H0616: 1, | H0087: 1, H0494: 1, | H0714: 1, S0438: 1, | S0440: 1, H0633: 1, | H0646: 1, S0144: 1, | S0002: 1, S0426: 1, | L0639: 1, L5566: 1, | L0772: 1, L0648: 1, | L0386: 1, L0650: 1, | L0653: 1, L0655: 1, | L0657: 1, L0659: 1, |
| Arg-239 to Gly-245. L0774: 2, H0660: 2, |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |   |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     | ···                 |                     |                     |                     | •                   |                     |                     | _                   |                     |                     |                     | ,                   |
|   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   | <del></del>         | • |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|   | 104770,<br>107300,<br>107500,<br>110700,<br>131210,<br>134638,<br>136132,<br>146740,<br>146740,<br>146740,<br>159440,<br>159440,<br>173610,<br>173610,<br>176310,<br>186780,  |
|---|---|
|   | 1922-923  |
| L0789: 1, L0793: 1,<br>L0664: 1, H0144: 1,<br>H0593: 1, H0682: 1,<br>H0670: 1, H0651: 1,<br>S0330: 1, S0152: 1,<br>H0521: 1, S0037: 1,<br>S0027: 1, S0206: 1,<br>L0743: 1, L0740: 1,<br>L0747: 1, L0756: 1, | H0707: 17, L0777: 14,<br>L0803: 7, L0748: 6,<br>S0002: 5, L0789: 5,<br>S0126: 5, L0747: 5,<br>L0750: 5, H0046: 4,<br>S0412: 4, H0574: 3,<br>S0010: 3, L0770: 3,<br>L0666: 3, H0354: 2,<br>H0510: 2, H0266: 2,<br>H0644: 2, H0673: 2,<br>H0649: 2, S0344: 2,<br>S0426: 2, L0766: 2,<br>L0776: 2, L0809: 2,<br>H0659: 2, S0328: 2,<br>H0539: 2, S0328: 2,<br>L0779: 2, L0752: 2,<br>L0779: 2, L0752: 2,<br>L0779: 2, L0752: 2,<br>L0771: 2, L0581: 2,<br>L0601: 2, H0170: 1,                                  |
|   | Ser-89 to Met-94,  Val-331 to Lys-339, L0803: 7, L0748: 6, Leu-344 to Met-350,S0002: 5, L0789: 5, Glu-386 to Tyr-394, S0126: 5, L0747: 5, Phe-480 to Gly-493, L0750: 5, H0046: 4, S00412: 4, H0574: 3, S00412: 4, H0574: 3, L0666: 3, H0354: 2, H0510: 2, H0566: 2, H0544: 2, S0344: 2, S0426: 2, L0766: 2, L0776: 2, L0809: 2, H06539: 2, S0328: 2, H06539: 2, S0328: 2, L0779: 2, L0779: 2, L0752: 2, L0779: 2, L0739: 2, L0779: 2, L0752: 2, L0779: 2, L0731: 2, L0601: 2, H0170: 1, S0342: 1, H07713: 1 |
|   | 3055  |
|   | 3 - 1553  |
|   | 088   |
| · · · · · · · · · · · · · · · · · · ·   | 1058287   |
|   | HPCTP25   |

| 227400,          | 227400,             | 600923,         | 601412,         | 601652,         | 602491              |                     |                     |                 |                 |                     |                  |                     |                     |                  |                  |                     |                  |                  |                  |                 |                     |                     |                  |                     |                     |                     |                     |                     |                     |
|------------------|---------------------|-----------------|-----------------|-----------------|---------------------|---------------------|---------------------|-----------------|-----------------|---------------------|------------------|---------------------|---------------------|------------------|------------------|---------------------|------------------|------------------|------------------|-----------------|---------------------|---------------------|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| [7: 1, S0114: 1, | H0583: 1, S0212: 1, | 2: 1, H0661: 1, | 0: 1, S0358: 1, | 4: 1, S0408: 1, | H0722: 1, S0046: 1, | S0476: 1, H0431: 1, | H0592: 1, H0587: 1, | 4: 1, T0114: 1, | 0: 1, H0156: 1, | L0021:.1, L0105: 1, | 52: 1, H0050: 1, | H0024: 1, H0014: 1, | S0051: 1, H0083: 1, | .8: 1, H0292: 1, | 13: 1, H0328: 1, | H0428: 1, H0032: 1, | 98: 1, H0090: 1, | 91: 1, H0038: 1, | 34: 1, H0616: 1, | 8: 1, T0041: 1, | F0042: 1, H0625: 1, | H0561: 1, H0714: 1, | 88: 1, H0529: 1, | L0769: 1, L0638: 1, | .0667: 1, L0646: 1, | .0764: 1, L0765: 1, | .0662: 1, L0794: 1, | .0649: 1, L0774: 1, | .0805: 1, L0379: 1, |
| H0717: 1         | H058                | 8058            | S042            | 8044            | H072                | S047                | H059                | S041            | 8058            | 1,002               | 500H             | H002                | 2002                | S6028: 1         | 20003:           | H042                | H059             | H0591: 1         | H0634:           | 8003            | T004                | H056                | S043             | )T01                | 990T                | 1076<br>1076        | 990T                | L064                | 0807                |
|                  |                     |                 | -               |                 |                     |                     |                     |                 |                 |                     |                  |                     |                     |                  |                  |                     |                  |                  |                  |                 |                     |                     |                  |                     | ·                   |                     |                     |                     |                     |
|                  |                     |                 |                 |                 |                     |                     |                     | -               |                 |                     |                  |                     |                     |                  |                  |                     |                  |                  |                  |                 |                     |                     |                  |                     |                     |                     |                     |                     |                     |
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|   |   | 148370,<br>238600,<br>238600,<br>238600,<br>238600,<br>600143,<br>601385, |
|---|---|---|
|   | ·   | 8p22-p21.3  |
| L0656: 1, L0518: 1,<br>L0783: 1, L0647: 1,<br>L0663: 1, L0664: 1,<br>L0665: 1, H0144: 1,<br>L0438: 1, H0520: 1,<br>H0547: 1, H0593: 1,<br>H0689: 1, S0340: 1,<br>S0004: 1, S0044: 1,<br>H0694: 1, S0046: 1,<br>H0694: 1, S0046: 1,<br>L0749: 1, L0758: 1,<br>S0031: 1, S0260: 1,<br>L0749: 1, L0758: 1, | H0059: 6, H0370: 5,<br>L0646: 2, L0754: 2,<br>H0664: 1, S0376: 1,<br>H0156: 1, H0615: 1,<br>H0688: 1, H0030: 1,<br>H0494: 1, L0764: 1,<br>L0662: 1, L0664: 1, |   |
|   | Arg-1 to Val-6.   |   |
|   | 3056  | 3057  |
|   | 13 - 999  | 1 - 1302  |
|   | 881   | 882   |
|   | 1058305   | 1058316   |
|   | HODKM52   | HCONB89   |

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|---------------------|---------------------|---------------------|---------------------|--|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 103950,             | 120580,             | 131440,             | 139130,             | 142680,                                | 176260,             | 190450,                                 | 200990,             | 216950,             | 600228,             | 600414,             | 600618,             | 960209              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 12p13               | 1                   |                     |                     |  |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
| L0777: 9, L0751: 8, | H0046: 5, H0550: 4, | L0665: 4, H0521: 4, | L0750: 4, H0623: 3, | H0435: 3, H0658: 3,                    | S0436: 3, S0212: 2, | H0580: 2, H0619: 2,                     | T0039: 2, H0427: 2, | H0266: 2, S0438: 2, | L0772: 2, L0659: 2, | L0666: 2, L0663: 2, | S0374: 2, S0152: 2, | H0696: 2, H0555: 2, | L0749: 2, L0731: 2, | L0758: 2, L0596: 2, | L0599: 2, S0192: 2, | H0685: 1, S0040: 1, | H0717: 1, S0116: 1, | H0483: 1, H0255: 1, | H0661: 1, H0663: 1, | S0442: 1, S0358: 1, | S0360: 1, S0408: 1, | H0728: 1, L0717: 1, | H0586: 1, H0618: 1, | H0318: 1, H0263: 1, | H0544: 1, H0510: 1, | H0290: 1, S0368: 1, | H0424: 1, H0553: 1, | H0606: 1, H0032: 1, | H0316: 1; H0634: 1, |
| Gly-1 to Lys-10,    | Glu-29 to His-36,   | Gly-43 to Asn-63,   | Ala-74 to Leu-84,   | Leu-132 to Asn-142,H0435: 3, H0658: 3, | Pro-189 to Pro-194, | Asp-196 to Ser-209, H0580: 2, H0619: 2, | Pro-252 to Gly-268, | Thr-271 to Lys-278, | Pro-292 to Gln-300. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 3058                |                     |                     |                     |  |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 11 - 925            |                     |                     |                     |  | ,                   |   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 883                 |                     |                     |                     |  | -                   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |
| 1058413             |                     |                     |                     |  |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HSABJ44             |                     |                     |                     |  | ,                   |   |                     |                     |                     |                     | ,                   |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|-----------------------|-----------------------|--|---|--|---|---|---|---------------------|---|---------------------|---|
|                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 126090,               | 129010,               | 142600,                                | 250850,                                 | 601386,                                | 601493                                  |   |   |                     |   |                     |   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 10q22-q27             |                       |  |   |  |   |   |   |                     |   |                     |   |
| H0551: 1, H0268: 1, | H0494: 1, H0646: 1, | S0426: 1, H0529: 1, | L0501: 1, L0769: 1, | L0646: 1, L0764: 1, | L0773: 1, L0662: 1, | L0649: 1, L0803: 1, | L0375: 1, L0784: 1, | L0776: 1, L0807: 1, | L0783: 1, L0790: 1, | H0693: 1, H0670: 1, | H0672: 1, H0539: 1, | S0350: 1, H0522: 1, | S3014: 1, S0032: 1, | L0748: 1, L0754: 1, | L0780: 1, L0752: 1, | H0595: 1, H0665: 1 and | S0242: 1. | L0748: 15, L0599: 15, | 1.0731: 9, 1.0751: 7, | ,L0750: 6, S0360: 5,                   | Ala-113 to Asp-122, L0659: 5, L0754: 5, | L0755: 5, L0601: 5,                    | Glu-142 to Lys-150, H0295: 4, L0655: 4, | Asn-189 to Ala-195, L0663: 4, L0664: 4, | H0670: 4, L0744: 4,                     | L0747: 4, L0757: 4, | Ser-272 to Gly-283, T0049: 3, S0474: 3, | H0124: 3, L0763: 3, | Cys-336 to Gly-344, L0662: 3, L0768: 3, |
|                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Ala-2 to Gly-8,       | Tyr-12 to Pro-26,     | Gly-102 to Asn-107, L0750: 6, S0360: 5 | Ala-113 to Asp-122,                     | Arg-130 to Val-135, L0755: 5, L0601: 5 | Glu-142 to Lys-150,                     | Asn-189 to Ala-195,                     | Ala-221 to His-228,  H0670: 4, L0744: 4 | Gln-248 to Ser-260, | Ser-272 to Gly-283,                     | Leu-321 to Glu-329, | Cys-336 to Gly-344,                     |
|                     |                     |                     |                     |                     |                     |                     |                     | •                   | •                   |                     |                     |                     |                     |                     |                     |                        |           | 3059                  |                       |  |   |  |   |   |   |                     |   |                     | i                                       |
|                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1-1128                |                       |  |   |  |   | •                                       |   |                     |   |                     |   |
|                     |                     |                     | •                   |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     | ٠                      |           | 884                   |                       |  |   |  |   |   |   |                     |   |                     |   |
|                     |                     |                     | ì                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1058432               |                       |  |   |  |   |   |   |                     |   |                     |   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                        |           | HBPND88               |                       |  |   |  |   |   |   |                     |   |                     |   |

| Г                                      |                     |                     |                    |                     |                     |                     |                     |             |           | -         |                     |                     |                  |                  |                  |                  |                  | •        |                    |                  |                  |          |           |          |                  |                  |                  |                  | $\neg$           |
|--|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|-------------|-----------|-----------|---------------------|---------------------|------------------|------------------|------------------|------------------|------------------|----------|--------------------|------------------|------------------|----------|-----------|----------|------------------|------------------|------------------|------------------|------------------|
|  |                     |                     |                    |                     | ı                   |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  | •                |                  |
|  |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  | ,                |                  |                  | •        |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
| _                                      |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     | :                   |                  |                  | •                |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  | -                |
|  |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
|  |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
|  |                     | •                   |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  | <del></del>      |                  | -                |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
| 9: 3,                                  | 9:3,                | 5: 3,               | 5:3,               | 6:3,                | 8: 2,               | 4:2,                | 0:2,                | 2:2         | 4: 2,     | 2: 2,     | <b>18: 2,</b>       | 4.2                 | 5: 1,            | 11: 1,           | 5: 1,            | 7.7.             | 8: 1,            | 2: 1,    | 0: 1,              | 31: 1,           | 31: 1,           | 4: 1,    | 7: 1,     | 2: 1,    | 16: 1,           | 1: 1,            | 31: 1,           | 59: 1,           | 12: 1,           |
| 1050                                   | .0776: 3, L.0809: 3 | .0666: 3, L.0665: 3 | S0328: 3, H0445: 3 | .0596: 3, S0026: 3, | .0600: 3, S0358: 2, | 30376: 2, S0444: 2, | H0083: 2, S0210: 2, | L0372: 2,   | L0774: 2, | L0382: 2, | H0435: 2, H0648: 2, | .0759: 2, H0444: 2, | .0608: 2, H0685: | .0785: 1, H0341: | 30212: 1, H0255: | H0661: 1, H0664: | H0662: 1, S0418: | , S0442: | S0408: 1, S0410: 1 | H0393: 1, H0431: | H0392: 1, H0331: | T0114:   | I, H0427: | T0082:   | H0530: 1, H0546: | H0545: 1, S0051: | H0030: 1, H0031: | H0032: 1, H0169: | H0674: 1, H0212: |
| 6:3,                                   | 6:3,                | 6:3,                | 8:3,]              | 6:3,                | 0:3,                | 6: 2,               | 3:2,                | .0761: 2, 1 | .0764: 2, | .0654: 2, | 5:2,                | 9:2,                | 8:2,             | 5: 1,            | 2: 1,            | 1: 1,            | 2: 1,            | 0: 1,    | 8: 1,              | 3: 1,            | 2: 1,            | 2: 1,    |           | 1:1,     | 0: 1,            | 5: 1,            | 0:1,             | 2: 1,            | 4: 1,            |
| <br> <br> <br>                         | L077                | 990T                | S032               | L059                | L060                | S037                | H008                | L076        | T076      | L065      | H043                | L075                | L060             | L078             | S021             | H066             | 990H             | S0420: 1 | <b>S040</b>        | H039             | H039             | L0622: 1 | T0109: 1  | L0021: 1 | H053             | H054             | H003             | H003             | H067             |
| 367.                                   |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
| Ala-358 to Gly-367. L0806: 3, L0509: 3 | •                   |                     |                    | ٠                   |                     |                     |                     |             |           |           |                     | ,                   |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
| 58 to                                  |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
| Ala-3                                  |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
|  |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  | •                |          | -                  |                  |                  |          |           |          |                  |                  |                  |                  |                  |
|  |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     | ,                   |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           | _        |                  |                  |                  |                  |                  |
|  |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
|  |                     |                     |                    |                     |                     | ,                   |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  | •                |                  |
| _                                      |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
|  |                     |                     |                    |                     |                     |                     |                     |             |           |           | •                   |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           | ·        |                  |                  |                  |                  | _                |
|  |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
|  |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
| _                                      |                     |                     | •                  |                     |                     |                     |                     |             |           | <u> </u>  |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  | $\dashv$         |
|  |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           | ,        |                  |                  |                  |                  |                  |
|  |                     |                     |                    |                     |                     |                     |                     |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |
| <u> </u>                               |                     |                     |                    |                     |                     |                     | _                   |             |           |           |                     |                     |                  |                  |                  |                  |                  |          |                    |                  |                  |          |           |          |                  |                  |                  |                  |                  |

|  |   |     |  | . ·   |
|--|---|-----|--|---|
| L0762: 1, L0640: 1,<br>L0770: 1, L0638: 1,<br>L0373: 1, L0646: 1,<br>L0771: 1, L0773: 1,<br>L0363: 1, L0364: 1,<br>L0381: 1, L0388: 1, |   |     | L0595: 1, L0362: 1,<br>L0603: 1, L0097: 1 and<br>S0384: 1. | <u> </u>  |
|  |   |     | Ara 20 to Ser 35   | Ser-79 to Gly-91,<br>Pro-105 to Arg-120,<br>Thr-168 to Glu-175,<br>Phe-187 to Ala-200,<br>Arg-272 to Lys-282, |
| •  |   |     | 3050   |   |
|  |   |     | 67 1597  | 1771  |
|  | , |     | 288  |   |
|  |   | · . | 1058438  | 0000  |
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|---|---|---|---|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   | _                                       |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     | <b>-</b>            |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     | ·.                  |                     |                     |                     |                     |                     |
| L0751: 3, L0750: 3,                     | S0358: 2, H0431: 2,                     | H0622: 2, L0637: 2,                     | L0375: 2, L0776: 2,                     | Leu-456 to Asp-461. L0666: 2, H0648: 2, | H0672: 2, S3014: 2, | L0741: 2, L0740: 2, | L0731: 2, T0002: 1, | S0040: 1, S6024: 1, | S0116: 1, H0664: 1, | S0418: 1, S0360: 1, | S0046: 1, L0717: 1, | S6016: 1, H0331: 1, | H0632: 1, H0559: 1, | H0486: 1, H0013: 1, | S0010: 1, H0318: 1, | S0049: 1, H0434: 1, | L0041: 1, L0471: 1, | S0362: 1, H0051: 1, | S0388: 1, S6028: 1, | H0266: 1, H0687: 1, | H0615: 1, S0364: 1, | H0551: 1, H0272: 1, | S0038: 1, H0100: 1, | L0351: 1, H0560: 1, | S0438: 1, H0509: 1, | H0652: 1, S0142: 1, | S0344: 1, S0426: 1, | L0769: 1, L0638: 1, | L0667: 1, L0373: 1, |
| Arg-325 to Asp-330, L0751: 3, L0750: 3, | Arg-332 to Phe-338, S0358: 2, H0431: 2, | Arg-358 to Lys-368, H0622: 2, L0637: 2, | Cys-433 to Asn-441, L0375: 2, L0776: 2, | Leu-456 to Asp-461.                     |                     |                     |                     |                     |                     |                     |                     | •                   | ٠                   |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |   | •                                       |   |   |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |                     |                     |
|   |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|        | 153880,<br>601622,<br>601649   |
|--------|--|
|        | 8, 7p21<br>33, 77, 77, 77, 77, 77, 77, 77, 70, 70, 70  |
|        | AR096: 10, AR089: 8,<br>AR039: 7, AR061: 7,<br>AR053: 6, AR052: 5,<br>AR033: 5, AR060: 3,<br>AR104: 3, AR055: 3<br>S0242: 271, S0196: 77,<br>H0551: 32, S0003: 13,<br>H0634: 11, H0635: 10,<br>H0250: 7, H0069: 7,<br>L0757: 6, H0486: 5,<br>H0623: 5, H0386: 4,<br>S0214: 2, H0411: 2,<br>S0214: 2, H0486: 5,<br>L0649: 2, L0803: 2,<br>L0789: 2, H0265: 1,<br>H0556: 1, H0140: 1,<br>S0040: 1, S0298: 1,<br>H0638: 1, S0376: 1,<br>H0638: 1, S0376: 1,<br>H0631: 1, H0461: 1,  |
| 222222 | Pro-27 to Lys-32, A Pro-37 to Ser-44, A Glu-46 to Gln-51, A Arg-63 to Asn-71, A Gln-125 to Ala-135, A Gln-150 to Asn-155. Ser-46, A Gln-150 to Asn-155. Ser- |
|        | 3061   |
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|        | 988  |
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|                     |                     |                 |                 |                 |                        | _,       |                       |                     |                 |                 |                 |                     |                 |                  |                 |                  | _                   |                     |                  |                  |                     |      |        |      |                  |      |                     |                     | -η                  |
|---------------------|---------------------|-----------------|-----------------|-----------------|------------------------|----------|-----------------------|---------------------|-----------------|-----------------|-----------------|---------------------|-----------------|------------------|-----------------|------------------|---------------------|---------------------|------------------|------------------|---------------------|------|--------|------|------------------|------|---------------------|---------------------|---------------------|
| ,                   |                     |                 |                 |                 |                        |          | 147450,               | 176261,             | 253270,         | 601399          |                 |                     |                 |                  |                 |                  |                     |                     |                  |                  | _                   |      |        |      |                  |      |                     |                     |                     |
|                     |                     |                 |                 |                 |                        |          | 21q22.1-              | q22.2               | <u> </u>        |                 |                 | <u>.</u>            |                 | ·                |                 |                  |                     |                     |                  |                  |                     |      |        |      |                  |      |                     |                     |                     |
| H0123: 1, H0200: 1, | H0109: 1, H0615: 1, | 1: 1, S0015: 1, | 0: 1, L0644: 1, | 6: 1, L0804: 1, | L0633: 1, S0126: 1 and | 0: 1.    | L0748: 13, L0731: 13, | L0749: 7, L0744: 6, | 8: 5, L0740: 5, | 8: 3, L0747: 3, | 8: 3, S0360: 2, | .0717: 2, S0022: 2, | 8: 2, H0547: 2, | 13: 2, L0439: 2, | 4: 2, L0604: 2, | 56: 1, H0013: 1, | H0427: 1, H0098: 1, | S0010: 1, H0014: 1, | 37: 1, H0163: 1, | 51: 1, H0509: 1, | H0652: 1, H0538: 1, | _    |        |      | 11: 1, L0375: 1, | ·    | .0789: 1, L0665: 1, | H0144: 1, H0670: 1, | H0672: 1, S0146: 1, |
| H012                | H010                | H01             | 0807            | 1076            | 1063                   | L0780: 1 | L01                   | L074                | 1043            | 207             | 1.075           | 1.071               | 1063            | 1074             | 1075            | 90H              | H042                | S0010: 1            | 390H             | H0561:           | 90H                 | 5507 | T0769: | 1707 | L0381:           | 1080 | 1078                | H01                 | .90H                |
|                     |                     | ,               |                 |                 |                        |          |                       |                     |                 |                 |                 | _                   |                 |                  |                 |                  | ,<br>               |                     |                  |                  |                     |      | -      |      |                  | -    |                     |                     |                     |
|                     |                     |                 |                 |                 |                        |          | 3062                  |                     |                 |                 |                 |                     |                 |                  |                 |                  |                     |                     |                  |                  |                     |      |        |      |                  |      |                     |                     |                     |
|                     |                     |                 |                 | ,               | •                      |          | 2 - 493               |                     |                 |                 |                 |                     |                 |                  |                 |                  |                     |                     |                  |                  |                     |      |        |      |                  |      |                     |                     |                     |
|                     |                     |                 |                 |                 |                        |          | 887                   |                     |                 |                 |                 |                     |                 |                  |                 |                  |                     |                     |                  |                  |                     |      |        |      |                  |      |                     |                     |                     |
|                     |                     |                 |                 |                 | •                      |          | 1058458               |                     |                 |                 | •               |                     |                 |                  |                 |                  |                     |                     |                  |                  |                     |      |        |      |                  |      |                     |                     |                     |
|                     |                     |                 |                 |                 |                        |          | HVVBX28               |                     |                 |                 |                 |                     |                 |                  | ·               |                  |                     |                     |                  |                  |                     |      |        |      |                  |      | -                   |                     |                     |

|                     |                     |                     |                     | - 1                    |                   | _                   |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                        |                      |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|------------------------|-------------------|---------------------|---------------------|---------------------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                        |                   |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     | •                      | 106300,              | 108800,             | 120290,             | 120290,             | 120810,             | 120820,             | 142857,             | 142858,             | 150270,             | 167250,             | 170261,             |
|                     |                     |                     |                     |                        |                   |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                        | 6p21.3               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0555: 1, L0750: 1, | L0756: 1, L0777: 1, | L0753: 1, L0755: 1, | L0757: 1, L0759: 1, | L0597: 1 and S0276: 1. |                   | AR089: 2, AR096: 2, | AR061: 1, AR033: 0, | AR055: 0, AR104: 0, | AR039: 0 | S0358: 5, H0596: 2, | H0059: 2, S0354: 1, | H0263: 1, L0738: 1, | L0639: 1, L0764: 1, | L0767: 1, L0768: 1, | L0659: 1, S0374: 1, | H0660: 1, H0672: 1, | S0380: 1 and L0731: 1. | L0655: 10, L0664: 9, | L0751: 8, H0521: 7, | S0360: 5, H0486: 5, | L0777: 4, H0657: 3, | H0638: 3, H0087: 3, | L0763: 3, L0743: 3, | L0748: 3, L0599: 3, | H0662: 2, H0637: 2, | H0581: 2, H0090: 2, | L0768: 2, L0651: 2, | L0653: 2, L0659: 2, |
|                     |                     |                     |                     | ,                      | Pro-27 to Lys-35. |                     |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                        | Trp-1 to Glu-9,      | Thr-29 to Val-35,   | Arg-73 to Thr-79.   | 1                   |                     |                     |                     |                     |                     |                     |                     |
|                     |                     | •                   |                     |                        | 3063              | 3064                |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                        | 3065                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        | 258 - 2291        | 242 - 1165          | <br>                |                     |          |                     |                     |                     |                     |                     |                     |                     |                        | 2 - 274              |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |
|                     |                     |                     |                     |                        | 888               | 688                 |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                        | 890                  |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |
|                     |                     |                     |                     |                        | 1058475           | 1058539             |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                        | 1058588              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        | HVVBI38           | HUKEJ46             |                     |                     |          |                     |                     |                     |                     |                     |                     |                     |                        | HDTFT47              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| 177900,             | 179450,             | 201910,             | 217000,         | 222100,             | 233100,         | 235200, | 248611,         | 256550,  | 256550,         | 600202,         | 600261,             | 601868,         | 602280, | 602475          |                 |                |                      |                |                 |               |                 |                     |                     |                 |                     |                 |                 |                     |                 |
|---------------------|---------------------|---------------------|-----------------|---------------------|-----------------|---------|-----------------|----------|-----------------|-----------------|---------------------|-----------------|---------|-----------------|-----------------|----------------|----------------------|----------------|-----------------|---------------|-----------------|---------------------|---------------------|-----------------|---------------------|-----------------|-----------------|---------------------|-----------------|
| ,0665: 2, H0659: 2, | H0648: 2, L0755: 2, | H0445: 2, H0650: 1, | 5: 1, L0808: 1, | H0254: 1, H0255: 1, | ): 1, H0663: 1, |         | ): 1, H0586: 1, |          | 9: 1, H0318: 1, | 5: 1, H0051: 1, | H0271: 1, H0252: 1, | l: 1, H0182: 1, |         | 3: 1, H0272: 1, | 5: 1, S0426: 1, | : 1, L0638: 1, | .0639: 1, L.0761: 1, | ; 1, L0643: 1, | i: 1, L0771: 1, | $\overline{}$ | :: 1, L0767: 1, | .0766: 1, L0549: 1, | .0774: 1, L0375: 1, | i: 1, L0776: 1, | .0606: 1, L0657: 1, | i: 1, L0782: 1, | ?: 1, L0666: 1, | .0663: 1, H0684: 1, | ): 1, S0044: 1, |
| 29907               | H0648               | H0445               | H0656: 1        | H0254               | H0669: 1        | H0402:  | H0580: 1        | T0060: 1 | H0069:          | H0085:          | H0271               | H0644: 1        | H0598   | H0063: 1        | H0646: 1        | L0371: 1, 1    | T0639                | L0372          | L0374;          | L0773         | L0662: 1        | 99L0T               | L0774               | L0378: 1        | 90907               | L0518: 1, I     | L0809: 1        | F0907               | H0670:          |
|                     | -                   |                     |                 | •                   |                 |         |                 |          |                 |                 | _                   |                 |         | -               |                 |                |                      |                |                 |               |                 | •                   |                     |                 | •                   |                 |                 | •                   |                 |
|                     |                     |                     |                 |                     |                 | -       |                 |          |                 |                 |                     |                 |         |                 |                 |                |                      |                |                 |               |                 |                     |                     |                 |                     |                 |                 |                     |                 |
|                     |                     |                     |                 |                     |                 |         | ,               |          |                 |                 |                     |                 |         |                 |                 |                |                      |                |                 | •             |                 |                     |                     | ,               |                     |                 | -               |                     |                 |

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|---------------------|---------------------|------------------------|----------------------|---------------------|---------------------|---------------------|--------------------|-----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                        | 14q32.3              |                     |                     |                     |                    |                       | _                    |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     | <del>112 (** ***) - 1</del> |                     |                     |                     |                     |                     |                     |                     |
| H0555: 1, L0741: 1, | _0744: 1, L0731: 1, | H0595: 1 and H0543: 1. | AR055: 18, AR033: 9, | AR096: 5, AR104: 5, | AR089: 4, AR060: 4, | AR052: 2, AR039: 2, | AR061: 2, AR053: 1 | H0617: 22, H0424: 13, | .0439: 12, H0618: 9, | H0658: 9, L0751: 9, | H0265: 8, L0666: 7, | S0126: 7, S0046: 6, | S0222: 6, H0031: 6, | L0803: 6, L0731: 6, | H0009: 5, L0769: 5, | L0758: 5, S0420: 4, | H0370: 4, L0163: 4, | H0553: 4, H0135: 4, | L0805: 4, L0657: 4, | L0809: 4, L0779: 4, | H0483: 3, H0150: 3, | H0266: 3, L0663: 3,         | H0670: 3, L0755: 3, | H0717: 2, L0415: 2, | H0661: 2, S0444: 2, | S0045: 2, H0549: 2, | H0486: 2, H0156: 2, | H0599: 2, S0049: 2, | H0373: 2, T0010: 2, |
|                     |                     | <b></b>                | Glu-42 to Leu-48,    | His-56 to Cys-62,   | Ala-107 to Pro-119. | $\overline{}$       | 7                  | -                     |                      |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                             |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        | 3066                 |                     | •                   | •                   |                    |                       |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                             |                     |                     |                     |                     |                     |                     |                     |
|                     | _                   |                        | 2 - 499              |                     |                     |                     |                    |                       |                      |                     |                     | ,                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                             |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        | 891                  | •                   |                     |                     |                    | ,                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                             |                     | •                   |                     |                     |                     |                     |                     |
|                     |                     |                        | 1058596              |                     |                     |                     |                    |                       |                      |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                             |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        | HSSFS71              |                     | •                   | <del></del>         |                    |                       |                      |                     |                     |                     | •                   |                     |                     |                     | •                   |                     |                     |                     |                     |                             |                     |                     |                     |                     |                     |                     | ;                   |

|                     |                     |                     |            | ·<br>    |           |           |                     |            |                   |           |                  |                  |                                      |          |                  |          |                  |                  |                  | <del>:</del> |                  |           |                  |          |                  |             |              |                  |                  |
|---------------------|---------------------|---------------------|------------|----------|-----------|-----------|---------------------|------------|-------------------|-----------|------------------|------------------|--------------------------------------|----------|------------------|----------|------------------|------------------|------------------|--------------|------------------|-----------|------------------|----------|------------------|-------------|--------------|------------------|------------------|
| ι                   |                     |                     |            |          |           |           |                     |            | ٠                 |           |                  |                  |                                      |          |                  |          |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  | ,                |
|                     |                     |                     |            |          |           |           |                     |            |                   |           |                  |                  |                                      |          |                  |          |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
|                     | ·                   |                     |            | · · ·    |           |           |                     |            |                   |           |                  |                  |                                      |          |                  |          |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
|                     |                     |                     |            |          |           |           |                     |            |                   |           |                  |                  |                                      |          |                  |          |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
|                     |                     |                     |            |          |           |           |                     |            |                   |           |                  |                  | <del></del>                          |          |                  |          |                  |                  |                  |              |                  |           |                  | •••      |                  |             |              | ,                |                  |
| 2,                  | 2,                  | 4                   | 2,         | 4        | ર્ય       | 2,        | બ                   | ર્લ        | 4                 | 4         | 1,               | 1,               | ۲,                                   | Ť,       | L,               | 1,       | 1,               | 1,               | :1;              | <del>.</del> | : 1,             | Ι,        | : <del>1</del> , | 1,       | : 1,             | : 1,        | : <b>1</b> , | <del>,</del>     | : <u>1</u> ,     |
| H0622: 2, L0142: 2, | H0181: 2, H0412: 2, | H0623: 2, L0351: 2, | L0800: 2,  | L0662:   | 10789: 3  | L0665: 2, | .0438: 2, H0689: 2, | 3014:      | .0741: 2, L.0743: | (,0747: 2 | H0170: 1, H0685: | S0040: 1, H0713: | H0716: 1, S6024:                     | 0212:    | H0484: 1, S0418: | S0468: ] | S0132: 1, S0476: | .0717: 1, L0394: | H0550: 1, H0441: | [0592        | H0587: 1, H0427: | l, H0706: | 1, H0253:        | , H0318: | HO581: 1; N0011: | 10041       | H0566:       | H0050: 1, L0471: | H0024: 1, H0014: |
| : 2, L              | : 2, H              | : 2, L              | : 2, L     |          | : 2, L    | : 2, L    | : 2, H              | . 2, S     | : 2, L            | : 2, L    | : 1, H           | 1, H             | : 1, S                               | : 1, S   | : 1, S           |          | : 1, S(          | : 1, L           | : 1, H           | : 1, H       | : 1, H           | : 1, H    |                  |          | 1; N             | i. 1, H     |              | : 1, L           | k 1, H           |
| 10622               | 10181               | 10623               | 0640: 2, 1 | 0648: 2, | .0794: 2, | .0664: 2, | ,0438               | 10555      | .0741             | ,0754: 2, | 10170            | 0040             | H0716                                | 10656    | 10484            | S0358:   | 0132             | 0717             | H0550            | 10431        | 10587            | .0021: 1  | H0004:           | r0048: 1 | 10581            | 10196       | H0563:       | <b>T005</b>      | 10024            |
|                     | <u></u>             | <u>بدر</u>          |            | ᆽ        | <u>►</u>  | <u> </u>  | <u></u>             | <u>بلز</u> | <u> </u>          | <u> </u>  | <u></u>          | S                | <u>, 44</u>                          | <u> </u> | <u>, 11, </u>    | <u> </u> | <u>(/)</u>       | .)==1.           | <u> </u>         | <u> </u>     | بسر              | <u> </u>  | <u> </u>         |          | <u> </u>         | <u>, 11</u> | <u> </u>     |                  | <u> </u>         |
|                     |                     |                     |            |          | ,         |           |                     |            |                   |           |                  |                  |                                      |          |                  |          |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
|                     |                     |                     |            |          |           |           |                     |            |                   |           |                  |                  |                                      |          |                  |          | •                |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
|                     |                     |                     |            | ٠        |           |           |                     |            |                   |           |                  |                  |                                      |          |                  |          |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
|                     |                     |                     |            |          |           |           |                     |            |                   |           | •                |                  |                                      |          |                  |          |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
| _                   |                     |                     |            |          |           |           |                     |            |                   |           |                  |                  | ···································· |          | -                |          |                  |                  |                  |              | ·                |           |                  |          |                  |             |              | •                |                  |
|                     |                     |                     |            |          |           |           |                     |            |                   |           |                  |                  |                                      |          |                  |          |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
| _                   |                     |                     |            |          |           |           |                     |            |                   |           | ٠.               |                  |                                      |          |                  | ·        |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
|                     |                     |                     |            |          |           |           |                     |            |                   |           |                  |                  |                                      |          |                  |          | •                |                  |                  |              |                  | . •       |                  | •        |                  |             |              |                  |                  |
|                     |                     |                     |            |          |           |           |                     |            |                   |           | -                |                  |                                      |          |                  |          |                  | •                |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
|                     |                     |                     |            |          |           |           |                     |            |                   |           |                  |                  |                                      |          |                  |          |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
| _                   |                     |                     |            |          |           |           |                     |            | ·                 |           |                  |                  |                                      |          |                  |          |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
|                     |                     |                     |            |          |           |           |                     |            |                   |           |                  |                  |                                      |          |                  |          |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |
|                     |                     | •                   |            |          |           |           |                     |            |                   |           | ٠,               |                  |                                      |          |                  |          |                  |                  |                  |              |                  |           |                  |          |                  |             |              |                  |                  |

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|                 |                     |                     |                     |                     | •                   | •                   | ,                   |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                   |                       |                       |                       |                       |    |                     |                     |
| H0051+1 S0051+1 | H0284: 1, H0428: 1, | H0182: 1, H0606: 1, | H0124: 1, H0616: 1, | H0087: 1, H0056: 1, | H0100: 1, L0370: 1, | S0208: 1, L0369: 1, | L0520: 1, L0763: 1, | L0770: 1, L5575: 1, | <br>L0775: 1, L0776: 1, | L0655: 1, L0383: 1, | L0352: 1, H0690: 1, | H0660: 1, S0328: 1, | S0330: 1, H0696: 1, | H0479: 1, H0627: 1, | S0037: 1, L0744: 1, | L0748: 1, L0777: 1, | L0759: 1, H0445: 1, | S0436: 1, L0608: 1, | L0601: 1, S0242: 1 and | H0352: 1. | AR039: 28, AR053: | 20, AR055: 19, AR033: | 17, AR052: 16, AR089: | 15, AR104: 12, AR061: | 12, AR096: 11, AR060: | 11 | H0615: 2, L0766: 2, | S0114: 1, H0650: 1, |
|                 |                     |                     |                     | :                   |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Thr-17 to Lys-23, | Lys-93 to Arg-98.     | •                     |                       |                       |    |                     |                     |
|                 |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 3067              |                       |                       |                       |                       |    |                     |                     |
|                 |                     |                     |                     |                     |                     |                     | •                   |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 153 - 1358        |                       |                       |                       |                       |    |                     |                     |
|                 |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     | •                   | ****                |                     |                     |                     |                     |                     |                     |                        |           | 892               |                       |                       |                       |                       |    |                     |                     |
|                 |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                        |           | 1058612           |                       |                       |                       |                       | •  |                     |                     |
|                 |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                      |           | HSDJH63           |                       |                       |                       |                       |    |                     |                     |

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|---------------------|---------------------|------------------------|---------------------|---------------------|----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|----------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                        |                     |                     |                      |                       | -                   |                     | •                   |                     |          |                     |                     |                     |                      |                     |                     |                     |                     |                        |           |                      |                     |                     |                     |                     | -                   |                     |                     |
| H0657: 1, L0791: 1, | H0689: 1, S0152: 1, | S0260: 1 and H0445: 1. | L0666: 3, L0657: 2, | H0689: 2, H0555: 2, | L0751: 2, S0001: 1,  | 0360: 1, H0675: 1,    | S0132: 1, H0549: 1, | S0222: 1, H0333: 1, | F0114: 1, H0599: 1, | .0022: 1, H0594: 1, |          | H0100: 1, H0561: 1, | S0382: 1, L0637: 1, | .0761: 1, L0649: 1, | .0788: 1, L.0789: 1, | .0665: 1, H0547: 1, | H0690: 1, H0658: 1, | H0660: 1, H0672: 1, | H0539: 1, H0696: 1, | .0743: 1, L0754: 1 and | .0780: 1. | H0052: 20, H0264: 5, | H0194: 4, T0010: 4, | H0435: 4, H0436: 4, | H0543: 4, S0222: 3, | L0439: 3, H0069: 2, | H0618: 2, H0581: 2, | H0012: 2, H0617: 2, | H0087: 2, S0038: 2, |
|                     |                     | S                      |                     | _                   | Gln-96 to Pro-111, 1 | Gln-210 to Pro-215. S |                     | <u> </u>            |                     |                     | <u>_</u> |                     |                     |                     |                      |                     |                     |                     | <b>1-1-1</b>        |                        |           |                      |                     |                     |                     | <b>h1</b>           |                     |                     | 1                   |
|                     |                     |                        | 3068                |                     |                      |                       |                     |                     |                     |                     |          |                     |                     |                     |                      |                     |                     |                     |                     |                        |           | 3069                 |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        | 2 - 1027            | •                   |                      |                       |                     |                     |                     |                     |          |                     |                     |                     |                      |                     |                     |                     |                     |                        |           | 426 - 238            |                     |                     |                     |                     | •                   |                     |                     |
|                     |                     |                        | 863                 |                     |                      |                       |                     |                     |                     |                     |          |                     |                     |                     |                      |                     |                     |                     |                     |                        |           | 894                  |                     |                     |                     |                     |                     |                     |                     |
|                     | _                   |                        | 1058622             |                     |                      |                       |                     | ٠                   |                     |                     |          |                     |                     |                     |                      |                     |                     |                     |                     |                        |           | 1058723              |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                        | HAHGD24             |                     |                      |                       |                     |                     |                     |                     |          |                     |                     |                     |                      |                     |                     |                     |                     |                        |           | HTAEV85              |                     |                     |                     |                     |                     |                     |                     |

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|                     |                      |                     |                     |                     |                     |                     |                     | , — <del>1</del>    |                     |                     |                     |                     |                     |                        |           |                     |                     |                        |           |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |
| L0438: 2, H0689: 2, | I.0741: 2. H0423: 2. | H0422: 2, H0265: 1, | S0001: 1, S0282: 1, | H0619: 1, H0250: 1, | H0635: 1, H0156: 1, | S0049: 1, H0597: 1, | H0327: 1, S0388: 1, | S0051: 1, H0271: 1, | S0036: 1, H0135: 1, | H0063: 1, H0116: 1, | H0652: 1, L0652: 1, | L0517: 1, H0539: 1, | H0518: 1, L0758: 1, | H0445: 1, L0592: 1 and | L0366: 1. | H0265: 1, H0050: 1, | H0644: 1, S0150: 1, | H0521: 1, H0542: 1 and | S0424: 1. | L0758: 7, L0666: 5, | L0749: 4, L0779: 4, | H0620: 3, L0540: 3, | L0439: 3, L0750: 3, | L0731: 3, L0759: 3, | S0360: 2, L0763: 2, | L0770: 2, L0803: 2, | L0775: 2, L0805: 2, | L0776: 2, L0665: 2, | L0743: 2, L0747: 2, |
|                     |                      |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                        |           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 3070                |                     |                        |           | 3071                |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                      |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 9 - 338             |                     |                        |           | 2184 -              | 2426                |                     | •                   |                     | •                   |                     |                     | •                   |                     |
|                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | \$68                | •                   |                        |           | 968                 |                     | •                   |                     |                     |                     |                     |                     |                     |                     |
|                     | -                    |                     | -                   | _                   |                     |                     |                     | _                   | _                   |                     | _                   |                     | <del></del>         |                        |           | 1058928             |                     |                        |           | 1058949             |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HPMME44             |                     |                        |           | HEEAZ17             |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|  | 106180,<br>114290,<br>138033,<br>138700,<br>139250,<br>150200,<br>154275,<br>162100,<br>170500,<br>170500,   |
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|  | 17q23-q25  |
| L0756: 2, S0040: 1, H0662: 1, S0045: 1, H0549: 1, H0550: 1, H0370: 1, H0615: 1, H06135: 1, H06135: 1, H0622: 1, H0623: 1, H0659: 1, L0772: 1, L0769: 1, L0768: 1, L0774: 1, L0768: 1, L0768: 1, L0768: 1, L0768: 1, L0768: 1, L0774: 1, L0663: 1, L0663: 1, L0664: 1, H0144: 1, L0664: 1, H0696: 1, L0744: 1, L0748: 1, L0748: 1, L0748: 1, L0751: 1 and L0757: 1. | H0657: 6, H0484: 6,<br>S0046: 5, H0486: 5,<br>L0666: 5, L0750: 5,<br>H0543: 5, S0360: 4,<br>S0010: 4, H0617: 4,<br>S0036: 4, H0038: 4,<br>H0056: 4, L0766: 4,<br>H0656: 3, H0292: 3,<br>L0455: 3, H0135: 3,<br>L0769: 3, L0439: 3,   |
|  | Asp-33 to Arg-39, H0657: 6, H0484: Ala-43 to Leu-48, S0046: 5, H0486: 5, Glu-256 to Gln-266, L0666: 5, L0750: 5, Gly-305 to Ile-311, H0543: 5, S0360: 4, Pro-314 to Ala-320, S0010: 4, H0617: 4, Gln-388 to Asn-394. S0036: 4, H0038: 4, H0056: 4, L0766: 4, H0656: 3, H0292: 3, L0455: 3, H0135: 3, L0769: 3, L0769: 3, L0769: 3, H0659: 3, L0769: 3, R0547: 3, R0559: 3, L0769: 3, R0547: 3, R0559: 3, L0769: 3, R0547: 3, R0559: 3, L0769: 3, R0577: 3, R0559: 3, R0577: 3, R0559: 3, R0577: 3, R0559: 3, L0769: 3, R0577: 3, R0559: 3, L0769: 3, R0577: 3, R0559: 3, L0769: 3, R0577: 3, R0559: 3, R0577: 3, R0559: 3, R0577: 3, R0559: 3, R0577: 3, R0559: 3, R0577: 3, R0559: 3, R0577: 3, R0559: 3, R0577: 3, R0559: 3, R0577: 3, R0559: 3, R05 |
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| 176960,             | 180860,             | 249000,             | 253250,             | 264470              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| L0752: 3, L0758: 3, | L0362: 3, S0430: 2, | H0341: 2, S0358: 2, | S0474: 2, H0052: 2, | H0046: 2, L0471: 2, | H0356: 2, H0284: 2, | H0553: 2, H0063: 2, | H0646: 2, L0761: 2, | L0768: 2, L0776: 2, | L0657: 2, L0659: 2, | L0664: 2, L0565: 2, | H0520: 2, H0519: 2, | H0689: 2, H0658: 2, | H0521: 2, H0696: 2, | S0044: 2, S0027: 2, | L0747: 2, L0749: 2, | L0591: 2, L0604: 2, | H0423: 2, L0615: 1, | H0685: 1, H0713: 1, | H0483: 1, H0255: 1, | H0663: 1, H0306: 1, | S0420: 1, S0444: 1, | H0580: 1, S0007: 1, | H0393: 1, H0411: 1, | S0278: 1, H0441: 1, | H0392: 1, H0438: 1, | H0586: 1, H0331: 1, | T0109: 1, H0013: 1, | H0427: 1, L0021: 1, | H0575: 1, H0618: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| -           |                  |                  |                  | <u> </u>         |          |                  | <u>.</u>         |                  |                  |                  | -                |                 | _                |                  |             |             |             |           |                  | <u> </u>         |                  |           |              |           | -       |                  |                  |                  |                  |
|-------------|------------------|------------------|------------------|------------------|----------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------|------------------|------------------|-------------|-------------|-------------|-----------|------------------|------------------|------------------|-----------|--------------|-----------|---------|------------------|------------------|------------------|------------------|
|             | •                |                  |                  |                  |          |                  |                  |                  |                  |                  |                  |                 |                  |                  |             |             |             |           |                  |                  |                  |           |              |           | ,       |                  |                  |                  |                  |
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|             |                  |                  |                  |                  |          |                  |                  |                  |                  | ٠                |                  |                 |                  |                  |             |             |             |           |                  |                  |                  |           |              |           |         |                  |                  |                  |                  |
|             |                  |                  |                  |                  | _        |                  |                  |                  |                  |                  |                  | <del></del>     |                  |                  |             |             |             |           |                  |                  |                  |           |              |           |         |                  |                  |                  |                  |
| I, H0251: 1 | 544: 1           | 024: 1           | 266: 1,          | 039: 1,          | 644: 1   | 181: 1           | 090: 1           | 040: 1           | 087: 1           | )413: 1          | 038: 1,          | 494: 1,         | 366: 1           | 438: 1,          | , H0130: 1, | , L4497: 1, | L0770: 1,   | L0372: 1, | 764: 1,          | 363: 1,          | 803: 1,          | .0650: 1, | 1, L0375: 1, | L0655: 1, | 383: 1, | 793: 1,          | 665: 1,          | 374: 1,          | 138: 1           |
| 4: 1, H(    | H0309: 1, H0544: | H0150: 1, H0024: | S6028: 1, H0266: | S0022: 1, H0039: | l: 1, H( | 10628: 1, H0181: | H0124: 1, H0090: | H0591: 1, H0040: | H0616: 1, H0087: | H0551: 1, H0413: | H0623: 1, S0038: | 0042: 1, H0494: | H0561: 1, H0366: | S0294: 1, S0438: | ): 1, HC    | 2, 1, 14    | ): 1, LO    | 5: 1, LO  | .0800: 1, L0764: | .0662: 1, L0363: | .0794: 1, L0803: | Ξ,        | 5: 1, LO     | 5: 1, 1.0 |         | .0519: 1, L0793: | .0663: 1, L0665: | H0144: 1, S0374: | H0691: 1, L0438: |
| H0374: 1    | H0306            | H015(            | S6028            | S0022            | H003     | H0628            | H012             | H059             | H061             | H055             | H062             | T0042           | H056             | S0294            | S0440: 1    | L0762: 1    | L0500: 1, I | L0796: 1, | 10800            | 10663            | 1079             | L0804: 1, | L0775:       | L0805: 1, | L0526   | L0519            | F066             | H014             | H069             |
|             |                  |                  |                  |                  |          |                  | ė                |                  |                  |                  |                  | a.              |                  |                  |             |             |             |           |                  |                  |                  |           |              |           |         |                  |                  |                  |                  |
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|             |                  |                  |                  |                  |          |                  | •                |                  |                  |                  |                  |                 |                  |                  |             |             | ·           |           |                  |                  | _                |           |              |           |         |                  |                  |                  |                  |
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|             |                  | ·                |                  |                  |          |                  |                  | ,                |                  |                  |                  |                 |                  |                  |             |             | ·····       |           |                  |                  |                  |           |              |           |         |                  |                  |                  |                  |
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|             |                  |                  |                  |                  |          |                  |                  |                  |                  |                  |                  |                 |                  |                  |             |             |             |           |                  |                  | _                |           |              |           |         |                  |                  |                  |                  |
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|   |  |                     |  |                     |                     |                     |                        |           |                   |                       |                     |   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0683: 1, H0435: 1,<br>H0670: 1, H0672: 1,<br>H0539: 1, H0710: 1, | S0152: 1, S0350: 1,<br>H0522: 1, H0576: 1, | L0612: 1, L0741: 1, | L0748: 1, L0756: 1,<br>S0434: 1. L0596: 1. | L0599: 1, S0011: 1, | H0668: 1, H0653: 1, | H0667: 1, H0136: 1, | S0192: 1, S0276: 1 and | H0422: 1. | AR060: 23, AR104: | 21, AR089: 11, AR061: | 8, AR096: 7, AR055: | 9 | L0803: 10, L0451: 8, | S0250: 6, L0804: 6, | L0731: 5, S0212: 4, | H0431: 4, H0547: 4, | L0439: 4, L0777: 4, | S0360: 3, L0776: 3, | L0592: 3, H0717: 2, | S0116: 2, S0046: 2, | H0004: 2, H0046: 2, | L0471: 2, H0553: 2, | H0090: 2, H0063: 2, | L0638: 2, L0662: 2, | L0774: 2, L0775: 2, |
|   |  |                     |  |                     |                     |                     |                        |           | Gly-1 to Leu-6.   | •                     |                     | - |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |  |                     |  |                     |                     |                     |                        |           | 3073              |                       |                     |   |                      |                     |                     | •                   |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |
|   |  |                     |  |                     |                     |                     |                        |           | 2 - 1450          |                       |                     |   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
|   |  |                     |  |                     |                     |                     |                        |           | 868               |                       |                     |   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |  |                     |  |                     |                     |                     |                        |           | 1059006           |                       |                     |   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |  |                     |  |                     |                     |                     |                        |           | HTGFW12           |                       |                     |   | •                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| L0655: 2, L0659: 2, | L0517: 2, L0809: 2, | S0126: 2, S0152: 2, | L0752: 2, H0170: 1, | T0049: 1, S0218: 1, | H0650: 1, H0661: 1, | L0534: 1, L0562: 1, | S0376: 1, H0619: 1, | H0645: 1, H0411: 1, | H0492: 1, H0069: 1, | L0021: 1, H0042: 1, | H0318: 1, H0581: 1, | H0421: 1, H0251: 1, | H0057: 1, H0266: 1, | H0428: 1, H0039: 1, | L0483: 1, H0031: 1, | H0644: 1, H0135: 1, | H0591: 1, H0040: 1, | H0056: 1, S0038: 1, | S0014: 1, H0560: 1, | S0438: 1, H0538: 1, | L0763: 1, L0769: 1, | L3905: 1, L0772: 1, | L0764: 1, L5574: 1, | L0651: 1, L0789: 1, | L0663: 1, H0144: 1, | H0658: 1, H0672: 1, | S0328: 1, S0406: 1, | H0555: 1, S3012: 1, | S0390: 1, L0748: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|   | 125852,            | 126452,                | 141900,   | 141900, | 141900,             | 141900,  | 141900, | 141900, | 142000, | 142000,     | 142200, | 142250, | 142270, | 176730, | 176730, | 176730, | 190020,  | 191290, | 192500,    | 192500, | 194071, |
|---|--------------------|------------------------|-----------|---------|---------------------|----------|---------|---------|---------|-------------|---------|---------|---------|---------|---------|---------|----------|---------|------------|---------|---------|
|   |                    | 126                    | 14]       | 14]     | 14]                 | 14       | 14      | 14]     | 142     | 142         | 14,     | 142     | 14,     | 17      | 176     | 17(     | <u>1</u> | 19      | 1 <u>9</u> | 19.     | 19      |
|   | , 11p15.5          | 0.                     |           |         |                     |          |         |         |         |             |         |         |         |         |         |         |          |         |            |         |         |
| L0750: 1, L0779: 1,<br>L0780: 1, L0755: 1,<br>L0758: 1, L0759: 1,<br>S0260: 1, H0445: 1,<br>S0434: 1, L0593: 1,<br>S0192: 1, S0194: 1,<br>H0423: 1, S0424: 1 and<br>H0506: 1. | AR039: 2, AR089: 1 | 1, AR053.<br>0, AR061: | 0, AR055: |         | HQ415: 1 and L0751: |          |         |         |         |             |         |         |         |         |         |         |          |         |            |         | •       |
| 107<br>107<br>107<br>108<br>108<br>109<br>109<br>109  |                    | AR                     | AR        | AR      | H                   | <u>_</u> |         |         |         | <del></del> | -       |         | _       |         |         |         |          |         |            |         |         |
|   | Ala-18 to Gly-23.  |                        |           |         |                     |          |         | ٠       |         |             |         |         |         |         |         |         | ,        |         |            |         |         |
|   | 3074               |                        |           |         |                     |          |         |         |         |             |         |         |         |         |         |         |          |         |            |         | _       |
| '   | 1 - 465            |                        |           |         |                     |          |         |         |         |             |         |         |         |         |         |         |          |         |            | ,       |         |
|   | 668                |                        |           |         |                     |          |         |         |         |             |         |         |         |         |         |         |          |         |            |         |         |
|   | 1059050            |                        |           |         | ·                   |          |         |         |         |             |         |         |         |         |         |         |          |         |            |         |         |
|   | HOFMT75            |                        |           |         |                     |          |         |         |         |             |         |         |         |         |         |         |          |         |            |         |         |

| 194071,<br>204500,<br>600856, | 601680,<br>602631,<br>602631 |                     |                     |          |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |           |                       |
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|                               |                              | AR089: 7, AR053: 7, | AR033: 5, AR055: 4, | AR061: 2 | L0439: 7, L0803: 6, | L0599: 3, S0360: 2, | L0794: 2, H0659: 2, | L0747: 2, H0423: 2, | H0662: 1, L0717: 1, | H0351: 1, H0592: 1, | H0085: 1, H0674: 1, | H0551: 1, S0422: 1, | L0761: 1, L0372: 1, | L0767: 1, L0653: 1, | L0776: 1, L0659: 1, | H0144: 1, H0651: 1, | H0436: 1, S0432: 1, | L0740: 1, L0754: 1, | L0779: 1, L0780: 1, | L0731: 1, S0436: 1 and | S0026: 1. | H0658: 2  | L0754: 23, L0747: 19, |
|                               | ·                            | Arg-1 to Gly-6.     |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                      |           |           |                       |
|                               |                              | 3075                |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 3076      | 3077                  |
|                               |                              | 241 - 501           |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   | ,                      |           | 437 - 285 | 1 - 1776              |
|                               |                              | 006                 |                     |          | <b>x</b>            |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                        | •         | 901       | 902                   |
|                               |                              | 1059085             |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1059102   | 1059145               |
|                               |                              | HARNB17             |                     |          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HPDRG65   | HAOSG15               |

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| H0584: 18, L0731: 17, S0372: 16, L0766: 14, | 49: 12            | 58: 11,           | 60: 9,                                     |  |                     | Ю: 7,              | 5: 7,              | 1:7,               | 8: 6,               | 9:6                 | 4: 6,               | 18: 5,              | 7: 5,               | 2: 5,              | 56: 4,             | 33: 4,             | 56: 4,              | 71: 4,              | 6: 4,               | 21: 4,              | 8: 4,                | 10: 3,              | 7:3,               | 1:3,                | 11: 3,             | 71: 3,              | 3,                  |
| (8, LO7<br>6, LO7                           | 2, L07            | 2, S03            | 1, 803                                     | 3, S042                                    | 3, H014             | , H004             | , L075             | , L059             | , L043              | i, L075             | , S042              | 5, 1.072            | ,1077               | , L036             | 5, H05             | t, H03             | t, H020             | t, L077             | 1, LO77             | l, H052             | 1, LO58              | I, H014             | 3, 5000            | , H041              | , H043             | 3, L047             | , S602              |
| 0584: 1                                     | .0740: 12, L0749: | .0752: 12, S0358: | 10750: 11, S0360: 9,<br>10013: 0, S0003: 0 | 10015: 2, 50005: 3,<br>H0341: 8, S0420: 8, | H0038: 8, H0144: 8, | .0593: 8, H0040: 7 | .0665: 7, L0755: 7 | .0757: 7, L0591: 7 | .0608: 7, L0438: 6, | .0439: 6, L0759: 6, | S0026: 6, S0424: 6, | H0052: 5, L0748: 5, | .0751: 5, L0777: 5, | .0758: 5, L0362: 5 | H0543: 5, H0556: 4 | H0663: 4, H0333: 4 | H0545: 4, H0266: 4, | H0591: 4, L0771: 4, | .0774: 4, L0776: 4, | .0666: 4, H0521: 4, | .0745: 4, L.0588: 4, | .0594: 4, H0140: 3, | H0686: 3, S0007: 3 | S0045: 3, H0411: 3, | S0222: 3, H0431: 3 | H0575: 3, L0471: 3, | T0003: 3, S6028: 3, |
| H S   | <u> </u>          | <u> </u>          | <u> </u>                                   |  | 蓝                   | <u> </u>           | ĭ                  | 그                  | <u> </u>            | 크                   | S                   | Ξ                   | ĭ                   | <u>고</u>           | 茁                  | Ħ                  | Ξ                   | 苴                   | ቯ                   | <u> </u>            | <u> </u>             | <u> </u>            | 耳                  | <u>8</u>            | Š                  | 耳                   | Ĕ                   |
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| 3,                 | ش                   | 3,                  | 3,                  | 3,                   | 3,                   | 3,                  | 3                   | 2,                  | 2,                  | 2,                  | 2,                  | .,                  | 2,                  | 2,                  | ์ ณ์                | 2,         | . ,                 | 2,                  | 2,                  | 2,                  | 2,                  | ~                   | 2,                  | 7,                  | 2,                  | ري .                | 2,                  | 2,                  | 2,                  |
| 10687:             | 10615:              | 10413:              | 30422: 3            | .0783:               | .0753:               | .0592:              | :: 2690             | H0170:              | 10002               | 30040:              | 30354:              | I0393:              | 10497:              | 10486:              | 30010:              | 10318:     | 30022:              | 10039:              | 10617:              | 10135:              | 30382:              | 0002: 2             | .0638:              | .0521:              | .0649:              | .0651:              | .0657:              | 10670:              | H0672:              |
| H0188: 3, H0687: 3 | S0214: 3, H0615: 3, | H0622: 3, H0413: 3, | 10494: 3, S0422: 3, | .0769: 3, L.0783: 3, | ,0744: 3, L.0753: 3, | 10445: 3, L0592: 3, | .0361: 3, L0697: 3, | H0624: 2, H0170: 2, | H0265: 2, T0002: 2, | H0218: 2, S0040: 2, | H0657: 2, S0354: 2, | S0376: 2, H0393: 2, | .0717: 2, H0497: 2, | H0574: 2, H0486: 2, | H0599: 2, S0010: 2, | 46: 2, F   | H0288: 2, S0022: 2, | H0428: 2, H0039: 2, | 70006: 2, H0617: 2, | H0674: 2, H0135: 2, | H0616: 2, S0382: 2, | S0326: 2, S0002: 2, | .0763: 2, L0638: 2, | .0764: 2, L0521: 2, | .0662: 2, L0649: 2, | .0775: 2, L0651: 2, | .0606: 2, L0657: 2, | .0526: 2, H0670: 2, | H0660: 2, H0672: 2, |
| H01                | S02                 | 90H                 | H04                 | L07                  | <u>107</u>           | H04                 | <u> </u>            | 90H                 | H02                 | H02                 | 90H                 | <b>S</b> 03′        | L07                 | H05                 | H05                 | <u>203</u> | H02                 | H04                 | <u>T</u> 00         | 90H                 | 90H                 | S03.                | 1.07                | 107                 | <u>106</u>          | 101                 | <u>106</u>          | L05                 | 90H                 |
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|                     |                      |                      |                     |                     |                     |               |             |                     |        |                  |                  |      |                    |                  |                  |       |                  | _     |                  |                    |          |                  |                  |                  |                  |                  |                  |                    |                  |
| 2,                  | 2,                   | .2                   | 7.2                 | 5: 1,               | ): 1,               | <b>)</b> : 1, | ): 1,       | 1,                  | 4: 1,  | 9: 1,            | 5: 1,            | : 1, | <b>)</b> : 1,      | 9: 1,            | 5: 1,            | 2: 1, | 5: 1,            | ): 1, | 8: 1,            | 8: 1,              | 1:1,     | <b>3</b> : 1,    | 5: 1,            | 7: 1,            | 2: 1,            | 3: 1,            | 5: 1,            | 4: 1,              | 8: 1,            |
| 962                 | 0596                 | 9604                 | 990                 | 022                 | 247                 | 900           | 065         | 0212                | 990]   | <b>[045</b> ]    | 1012             | 8000 | 0619               | 1054             | 1941             | 1061  | (063             | 0280  | 1061             | ,00 <u>7</u>       | 042      | 020              | 1008             | 1056             | 1001             | 1037             | 1037             | 6501               | 1002             |
| 2. H                | 2, L                 | 2, L                 | 2, H                | 1, H                | 1, S                | 1, T          | 1, H        | 1, S                | 1, H   | 1, H             | 1, H             | 1, T | 1, H               | 1, E             | 1, E             | 1, F  | 1, H             | 1, S  | 1, H             | 1, T               | 1, H     | 1, H             | 1, I             | 1, F             | 1, F             | . L.             | 1, H             | 1, E               | 1, F             |
| S0152: 2, H0626: 2, | .0746: 2, L.0596: 2, | .0599: 2, L.0604: 2, | ,0601: 2, H0667: 2, | ,0615: 1, H0225: 1, | H0220: 1, S0470: 1, | 295:          | 218:        | LQ785: 1, S0212: 1, | 483:   | H0402: 1, H0459: | H0638: 1, H0125: | 418: | S0046: 1, H0619: 1 | 10645: 1, H0549: | H0370: 1, H0415: | 438:  | Г0039: 1, H0635: | 427:  | 70082: 1, H0618: | H0253: 1, T0048: 1 | 071:     | S0049: 1, H0209: | H0194: 1, H0085: | H0046: 1, H0567: | H0172: 1, H0012: | H0024: 1, H0373: | 70010: 1, H0375: | .0171: 1, H0594: 1 | H0271: 1, H0028: |
| 80                  | 2                    | <u> </u>             | <u>Š</u>            | <u>3</u>            | HO                  | 贸             | <u>S</u> 0. | 9                   | )<br>H | H<br>H           | 丑                | SÓ   | SO                 | 田                | 丑                | E E   | 으                | 田     | ೭                | 丑                  | <u>은</u> | 80               | H                | H                | HO               | Ħ                | <u>1</u>         | <u> </u>           | Œ                |
|                     |                      |                      |                     |                     |                     |               |             |                     |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  |                  |                  |                  |                  |                    |                  |
|                     |                      |                      |                     |                     |                     |               |             |                     |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  |                  |                  |                  |                  |                    |                  |
|                     |                      |                      |                     |                     |                     |               |             |                     |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  |                  |                  |                  | •                |                    |                  |
|                     |                      |                      |                     |                     |                     |               |             |                     |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  |                  |                  |                  |                  |                    |                  |
| H                   |                      |                      |                     | _                   |                     |               |             |                     |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  | •                |                  |                  |                  |                  |                    |                  |
|                     |                      |                      |                     |                     |                     |               |             |                     |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  |                  |                  |                  |                  |                    |                  |
| 一                   |                      |                      |                     |                     |                     |               |             |                     |        |                  | _                |      |                    |                  |                  | -     |                  |       |                  |                    |          |                  |                  |                  |                  | -                |                  |                    |                  |
|                     |                      |                      |                     |                     |                     |               |             |                     |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  |                  |                  |                  |                  |                    |                  |
|                     |                      |                      |                     |                     |                     |               |             | ·-··                |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  |                  |                  |                  |                  |                    |                  |
|                     |                      |                      |                     |                     |                     |               |             |                     |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  |                  |                  |                  |                  |                    |                  |
| ┝                   |                      | <del></del>          |                     |                     |                     |               |             | ·                   |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  |                  |                  |                  |                  |                    |                  |
| -                   |                      |                      |                     |                     |                     |               |             |                     |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  |                  |                  |                  |                  |                    |                  |
|                     |                      | •                    |                     |                     |                     |               |             |                     |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  |                  |                  |                  |                  |                    |                  |
| L                   |                      |                      |                     |                     |                     |               | _           |                     |        |                  |                  |      |                    |                  |                  |       |                  |       | _                |                    |          |                  |                  |                  |                  |                  | _                |                    |                  |
|                     |                      |                      |                     |                     |                     |               |             |                     |        | •                |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  | ,                |                  |                  |                  |                    |                  |
|                     |                      |                      |                     |                     |                     |               |             |                     |        |                  |                  |      |                    |                  |                  |       |                  |       |                  |                    |          |                  |                  |                  |                  |                  |                  |                    |                  |
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|                     |                     |                     |               |                     |                     |                     |                     | _                   | <u>-</u>            |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |
| H0328: 1, L0483: 1, | H0553: 1, H0628: 1, | H0673: 1, H0598: 1, | $\overline{}$ | H0634: 1, H0264: 1, | H0272: 1, H0412: 1, | H0059: 1, S0038: 1, | .0351: 1, L0564: 1, | .0041: 1, S0016: 1, | H0560: 1, S0464: 1, | 30466: 1, L0065: 1, | I0132: 1, H0131: 1, | H0633: 1, S0144: 1, | S0142: 1, S0426: 1, | .0598: 1, L0520: 1, | .0762: 1, L0770: 1, | .0761: 1, L0772: 1, | <br>.0768: 1, L0794: 1, | .0388: 1, L0803: 1, | .0527: 1, L0656: 1, | .0634: 1, L0518: 1, | • | .0791: 1, L0664: 1, | .0565: 1, H0693: 1, | H0520: 1, H0547: 1, | H0593: 1, S0126: 1, | H0659: 1, H0648: 1, | S0328: 1, S0330: 1, | H0539: 1, L0602: 1, |
|                     | <u>E</u>            | <u> </u>            | <u>æ</u> .    | <u></u>             | <u> </u>            | <u>E</u>            |                     | <u>Fre</u>          | <u>工</u>            | S                   | <u> </u>            | <u> </u>            | S                   |                     | . <del></del>       |                     |                         |                     | ı                   |                     |   |                     |                     |                     | <u>بلن</u>          | <u> </u>            | S                   | I                   |
|                     |                     |                     |               |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     | •                   |   |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <br>                    |                     |                     |                     |   |                     |                     |                     |                     |                     |                     | •                   |
|                     |                     |                     |               |                     |                     |                     |                     |                     | <del></del>         |                     |                     | •                   | _                   | •                   | _                   |                     |                         |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |               |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |

| H0436: 1, H0478: 1,<br>H0627: 1, S0322: 1,<br>S3014: 1, S0028: 1,<br>S0206: 1, S0032: 1,<br>L0742: 1, L0756: 1,<br>L0780: 1, H0343: 1,<br>L0589: 1, L0595: 1,<br>S0011: 1, H0668: 1,<br>S0242: 1, S0194: 1,<br>S0276: 1, H0422: 1 and<br>L0698: 1. | AR089: 4, AR039: 3,<br>AR033: 2, AR096: 2,<br>AR104: 2, AR060: 2,<br>AR053: 2, AR061: 1,<br>AR055: 0<br>S0040: 1, S0114: 1,<br>H0412: 1, S0386: 1,<br>S0472: 1, L0649: 1,<br>L0803: 1, S0053: 1,<br>L0748: 1 and H0543: 1. | L0754: 4, L0766: 3,<br>L0803: 3, H0648: 3,<br>L0758: 3, L0800: 2,<br>L0775: 2, L0666: 2,<br>L0747: 2, L0779: 2,<br>S0116: 1, S0358: 1,<br>H0574: 1, L0021: 1,<br>L0022: 1, S0003: 1,<br>H0615: 1, L0351: 1, |
|--|--|---|
|  | Asn-1 to Gln-6, AR089: Thr-71 to Ala-77, AR033: Cys-114 to Ser-126, AR104: Pro-147 to Tyr-156, AR053: Gly-176 to Gly-182, AR055: Gly-176 to Gly-182, AR055: S0040: H0412: S0472: L0803:                                    | Pro-6 to Lys-19.  |
|  | 3078   | 3079  |
|  | 76 - 1827  | 1000 -<br>1254  |
| ·  | 903  | 906   |
|  | 1059180  | 1059186   |
|  | HHEND31  | HBMSN62   |

| L0667: 1, L0764: 1,<br>L0768: 1, L0806: 1,<br>L0379: 1, L0659: 1,<br>L0647: 1, L0791: 1,<br>L0792: 1, L0663: 1,<br>L0664: 1, L0665: 1,<br>S0330: 1, L0748: 1,<br>L0439: 1, L0777: 1 and<br>L0599: 1. | L0769: 6, L0757: 5,<br>L0777: 3, L0731: 3,<br>H0428: 2, L0809: 2,<br>S0404: 2, L0748: 2,<br>L0758: 2, H0575: 1,<br>H0251: 1, H0085: 1,<br>H0644: 1, H0646: 1,<br>L0773: 1, L0662: 1,<br>L0773: 1, L0775: 1,<br>L0782: 1, L0775: 1,<br>L0782: 1, L0775: 1,<br>L0782: 1, L0779: 1,                               | AR089: 2, AR053: 2,<br>AR061: 2, AR039: 2,<br>AR060: 2, AR096: 1,<br>AR033: 1, AR055: 1,<br>AR104: 1, AR052: 0<br>L0664: 3, S0354: 2,<br>H0617: 2, L0509: 2,<br>H0670: 2, L0601: 2, |
|--|--|---|
|  | Ser-38 to Gly-43, L0769: 6, L0757: 5 Glin-80 to Ile-93, L0777: 3, L0731: 3, Leu-104 to Arg-109. H0428: 2, L0809: 2, S0404: 2, L0748: 2, L0758: 2, H0575: 1, H0251: 1, H0085: 1 H0644: 1, H0646: 1 L0773: 1, L0662: 1, L0773: 1, L0783: 1, L0782: 1, L0783: 1, L0782: 1, L0783: 1, L0747: 1, L0749: 1 L0779: 1. | Pro-11 to Arg-21,<br>Gly-34 to Ser-41,<br>Pro-65 to Asn-72,<br>Ser-80 to Gln-85,<br>Phe-124 to Cys-129.   |
|  | 3080   | 3081  |
| ·  | 2 - 358  | 32 - 1348   |
|  | 905  | 906   |
|  | 1059241  | 1059394   |
|  | HOVCJ46  | HWLEP14   |

|   | •  | 164731,<br>172400,<br>172400,<br>180901,<br>180901,<br>221770,<br>248600,<br>600918,   |
|---|--|--|
|   |  | 19q13.1  |
| H0170: 1, H0510: 1,<br>H0622: 1, H0604: 1,<br>L0662: 1, H0689: 1 and<br>H0683: 1. | AR096: 2, AR089: 1, AR055: 1, AR033: 0, AR060: 0, AR061: 0, AR052: 0, AR104: 0, AR053: 0 H0666: 15, H0622: 5, L0809: 3, L0731: 2, H0586: 1, H0032: 1, H0488: 1, L3905: 1, L0766: 1, L0803: 1, L0766: 1, L0803: 1, L0769: 1, L0777: 1, L0779: 1, L0779: | H0494: 21, H0529: 16, L0755: 16, S0358: 15, H0435: 13, L0665: 11, L0747: 11, L0752: 11, H0521: 10, L0649: 9, S0360: 8, L0661: 8, L0659: 8, L0659: 8, L0653: 6, S0376: 6, H0663: 6, H0592: 6, S0444: 6, H0592: 6,   |
|   | Gly-1 to Asn-7, Lys-12 to Glu-20, Asn-34 to Gly-41, Val-79 to Asn-88.  | Ser-1 to Trp-7,  Asp-47 to Ile-52, Pro-70 to Ser-80, Cys-89 to Thr-98, Ala-131 to Ser-142, Phe-169 to Cys-176, S0360: 8, L0662: 8, Gly-183 to Ser-193, L0659: 8, L0601: 8, Phe-202 to Pro-209, S0354: 7, L0754: 7, Arg-243 to Ala-249, H0663: 6, S0376: 6, Ser-256 to Lys-265. |
|   | 3082   | 3083   |
|   | 802 - 491  | 382 - 1191   |
|   | 206  | 806  |
|   | 1059415  | 1059532  |
|   | HTFNO73  | HDABR73  |

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|                     | •                   |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                     |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     | ĺ         |
| <u> </u>            |                     |                     |                    |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                     |                    |                     | -    |                     |                     |                     |                     |                    |                     |                     |                     | $\dashv$  |
|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                     |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     | 1         |
|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                     |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     |           |
| _                   |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                     |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     |           |
| ١.                  | _                   |                     | _                  |                     |                     |                     |                     |                     |                     |                     | _                   | _                   |                    | •                  |                    | _                   | •                   | •                  |                     | _    |                     |                     |                     | . 5                 | - 5                | . د                 | _ \$                |                     |           |
| H0586: 6, H0618: 6, | H0620: 6, L0637: 6, | .0646: 6, L0766: 6, | 0666: 6, H0295: 5, | 10661: 5, H0497: 5, | .0653: 5, H0593: 5, | 5.4,                | 10580: 4, H0615: 4, | '0023: 4, H0038: 4, | 10647: 4, L0772: 4, | .0768: 4, L0657: 4, | S0374: 4, H0685: 3, | 10483: 3, S0442: 3, | 1:3                | 1:3                | 7:3                | HO488: 3, SO440: 3, | 10641: 3, L0794: 3, | 0664: 3, H0666: 3, | 30380: 3, L0439: 3, | 6:3, | H0294: 2, H0656: 2, | 10664: 2, H0662: 2, | H0676: 2, S0408: 2, | H0370: 2, H0392: 2, | 7:2                | H0046: 2, H0009: 2, | H0012: 2, H0083: 2, | H0688: 2, H0213: 2, | 호<br>당    |
| <u>1</u> 9          | 063                 | 9/0                 | 029                | 9                   | 059                 | 035                 | 1901                | 003                 | 770                 | 065                 | 990                 | 4                   | 1058               | 1003               | 1991               | 4                   | 929                 | 990                | 943                 | 059  | 1065                | 1066                | 8                   | 1035                | <b>1058</b>        | 90                  | 300E                | 1021                | H0040:    |
| 6, H                | 6, L                | 6, L                | 6, H               | 5, H                | 5, H                | S, S.               | <b>4</b> , H        | 4, H                | 4, L                | 4, L                | 4, H                | 3, S                | 3, E               | 3, H               | 3, H               | 3, S                | 3, L                | 3, H               | 3, L                | 3, L | 2, F                | 2, E                | 2, S                | 2, F                | 2, F               | 2, E                | 2, F                | 2, F                |           |
| 386:                | 520:                | 46.                 | 99                 | 561:                | 53:                 | .0758: 5, S0356: 4, | 380                 | 23:                 | 7.7                 | .89                 | 74:                 | 183:                | H0253: 3, H0581: 3 | 10604: 3, H0031: 3 | H0553: 3, H0617: 3 | <u>88</u> :         | 14.                 | 4                  | 800                 | 50:  | 294:                | 8                   | 576:                | 370:                | H0409: 2, H0587: 2 | 46:                 | )12:                | 588:                | H0030: 2, |
| 员员                  | HO                  | <u>81</u>           | <u>2</u>           | <u>H</u>            | <u>2</u>            | <u>1</u> 2          | <u>H</u>            | <u>8</u>            | HOH                 | 507                 | <u>S</u>            | <u>H</u> 0          | H02                | HO                 | H0;                | <u>Н</u>            | HO                  | <u>8</u>           | <u>8</u>            | 10   | <u>H</u> 02         | <u>H</u>            | <u>H</u> 0          | H0                  | <u>H</u> 0         | ЮĦ                  | ЮH                  | Ĕ                   | 뢰         |
|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                     |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     |           |
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|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    | •                  |                    |                     | ,                   |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     |           |
| $\vdash$            |                     | ···                 | -                  | -                   |                     |                     |                     |                     |                     |                     | _                   |                     |                    |                    |                    |                     |                     | _                  |                     | •    |                     |                     |                     |                     |                    |                     |                     |                     | $\dashv$  |
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| $\vdash$            |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    | _                   |                     |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     | $\dashv$  |
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|                     | •                   |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                     |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     |           |
| ┝                   |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                    |                    |                    |                     |                     |                    |                     |      |                     |                     |                     |                     |                    |                     | <del></del> ,-      |                     |           |
|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                  |                    |                    |                     |                     |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     |           |
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|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                     |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     |           |
|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                     |                    |                     |      |                     |                     | _                   | _                   |                    | _                   | _                   | _                   |           |
|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                     |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     |           |
|                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                     |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     |           |
| Щ                   |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                    |                    |                     |                     |                    |                     |      |                     |                     |                     |                     |                    |                     |                     |                     |           |

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|                     |                     |                      |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |
| H0059: 2, H0633: 2, | H0646: 2, S0422: 2, | .0763: 2, L.0771: 2, | .0382: 2, S0052: 2, | H0144: 2, S0310: 2, | H0689: 2, H0658: 2, | H0670: 2, H0660: 2, | S0328: 2, H0522: 2, | H0696: 2, H0478: 2, | .0744: 2, L0749: 2, | J0731: 2, L0759: 2, | S0434: 2, H0543: 2, | S0424: 2, H0506: 2, | S0430: 1, H0650: 1, | H0657: 1, S0116: 1, | H0484: 1, T0008: 1, | S0132: 1, H0550: 1, | H0486: 1, T0114: 1, | ,0021: 1, H0318: 1, | H0309: 1, H0263: 1, | H0234: 1, H0596: 1, | H0597: 1, H0121: 1, | H0150: 1, L0471: 1, | H0375: 1, H0687: 1, | H0428: 1, H0039: 1, | H0622: 1, H0033: 1, | H0644: 1, H0032: 1, | H0673: 1, H0169: 1, | S0036: 1, H0616: 1, | F0067: 1, H0264: 1, |
|                     | <u>;</u>            | <b>.</b>             | · <u></u>           | <del>''————</del>   | <u>. 11. i</u>      | <u>iLi</u>          | S                   | <u>i-L-i</u>        |                     |                     | <u>S</u>            | S                   | S                   | <u>. 144.</u>       | <u>11</u>           | <u>8</u>            | <u> 11</u>          |                     | <u> </u>            | <u>, 141</u>        | <u> </u>            |                     | <u>i-L-i</u>        | <u> </u>            | <u> </u>            | <u> </u>            |                     | S                   | L                   |
|                     |                     |                      |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |
|                     |                     |                      |                     | -                   | -                   | •                   |                     |                     |                     | , <u>-</u> -        |                     | •                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                       |                     |   |
| H0560: 1, H0625: 1, | S0466: 1, S0150: 1, | S0472: 1, S0144: 1, | S0002: 1, L0640: 1, | L0770: 1, L0761: 1, | L0372: 1, L0764: 1, | L0363: 1, L0364: 1, | L0774: 1, L0775: 1, | L0375: 1, L0806: 1, | L0805: 1, L0776: 1, | L0655: 1, L0493: 1, | L0636: 1, L0383: 1, | L0663: 1, H0693: 1, | H0520: 1, H0547: 1, | S0126: 1, H0690: 1, | H0682: 1, H0683: 1, | H0684: 1, H0659: 1, | H0648: 1, H0672: 1, | 80330: 1, 80152: 1, | S0350: 1, S0392: 1, | S0432: 1, L0741: 1, | L0751: 1, L0745: 1, | L0757: 1, S0436: 1, | L0592: 1, L0599: 1, | H0423: 1, S0460: 1, | S0446: 1 and L0600: 1. | H0435: 20, L0751: 20, | H0436: 6, L0665: 5, | H0052: 4, S0036: 4,                     |
|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | Gln-37 to Arg-58,     | Arg-75 to Met-87,   | Lys-113 to Asn-123, H0052: 4, S0036: 4, |
|                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     | ٠                   |                     |                     |                     |                     |                        | 3084                  |                     |   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                        | 169 - 1698            |                     |   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                      | 606                   |                     |   |
|                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1059626               |                     |   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HOGAJ24               |                     |   |

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|   |   | •                                       |                     |                     |                     |                     |                     |                     |                     |  |                                      |                     |                     |                  |                  |                  |                  |          |                  |                  |                  |               |                  |          |                  | •                |                  |                     |         |
|   |   |   |                     |                     |                     |                     |                     |                     |                     | ,                                      |                                      |                     |                     |                  |                  |                  |                  |          |                  |                  |                  |               |                  |          |                  |                  |                  |                     |         |
|   |   |   |                     |                     |                     |                     |                     |                     |                     |  |                                      |                     |                     |                  | _                |                  |                  | •        |                  |                  |                  |               |                  |          |                  |                  |                  |                     |         |
| 4: 3,                                   | 1:2,                                    | ): 2,                                   | 4: 2,               | 7:2,                | 2:2,                | 6: 2,               | 3: 2,               | 5: 1,               | 2: 1,               | 1:1,                                   | 6: 1,                                | 9:1,                | 4: 1,               | J3: 1,           | 6: 1,            | 0: 1,            | 9: 1,            | 6: 1,    | 30: 1,           | 71: 1,           | 3: 1,            | 4: 1,         | 1:1,             | 1: 1,    | 8: 1,            | 3: 1             | 18: 1            | 0: 1,               | 4.1     |
| 1026                                    | 1026                                    | 001                                     | 076                 | 1054                | 190H                | 275                 | 1042                | H029                | 028                 | H066                                   | 3035                                 | 1, H0619:           | 1, S6014:           | 790H             | H015             | S001             | <b>3004</b>      | , H0050: | H032             | H027             | 300E             | H0494:        | L076             | L0771:   | .078             | H059             | 790H             | 3033                | ,10744: |
| : 4, F                                  | 2,                                      | . 2, T                                  | : 2, I              | : 2, I              | 2,1                 | : 2, I              | : 2, F              | 1,1                 | : 1, S              | : 1,]                                  | 1,5                                  | : 1, F              | : 1, 5              |                  | . 1, ]           | 1, 1             | 1,               | : 1,]    | 1, 1,            | k 1, ]           | : i, i           | •             | i: 1, ]          | 1,1      | . 1,             | .1.              |                  | : 1, §              | Į       |
| Arg-148 to Tyr-155, L0438: 4, H0264: 3, | Ser-158 to Gly-165, H0265: 2, H0261: 2, | Ala-168 to Lys-178, S0222: 2, T0010: 2, | L0770: 2, L0764: 2, | L0648: 2, H0547: 2, | H0682: 2, H0672: 2, | .0748: 2, L0756: 2, | S0031: 2, H0423: 2, | H0556: 1, H0295: 1, | S0134: 1, S0282: 1  | Cys-423 to Arg-430, H0255: 1, H0661: 1 | Fhr-452 to Cys-462, H0663: 1, S0356: | S0360:              | L0717:              | H0415: 1, H0643: | H0486: 1, H0156: | H0618: 1, S0010: | H0581: 1, S0049: | H0457: 1 | 10012: 1, H0320: | 10354: 1, H0271: | .0140: i, H0063: | H0272: 1      | H0646: 1, L0761: | 0644: 1, | .0774: 1, L0788: | H0698: 1, H0593: | H0658: 1, H0648: | S0328: 1, S0330: 1, | H0518:  |
| 5. L                                    | 5, 田                                    | 8, <u>S</u> (                           | <u>,</u>            |                     |                     |                     |                     |                     |                     | H,0%                                   | 2, H                                 | <u>8</u>            | 7                   | _                | Ξ                | Ξ                | H                | 王        | 王                | 프                | <u> </u>         | 王             | 王                | <u> </u> | 교                | 王                | 王                | <u> </u>            | H       |
| /r-15                                   | y-16                                    | 's-17                                   | His-215 to Ile-221, | Ser-236 to Tyr-241, | Ala-278 to Gly-287, | Gly-294 to Asp-299, | Glu-306 to Ser-313, | Ser-374 to Arg-382, | Ala-411 to Pro-416, | rg-43                                  | 18-46                                | Glu-479 to Glu-499, | Gly-501 to Gly-507. |                  |                  |                  |                  |          |                  |                  |                  |               |                  |          |                  |                  |                  |                     |         |
| to Ty                                   | o Gi,                                   | to Ly                                   | o Ile               | o Ty                | 5<br>G              | to A                | to Se               | o Ar                | to Pr               | to A                                   | S<br>C                               | to G                | 50 G                |                  |                  |                  | •                |          |                  |                  |                  |               |                  |          |                  |                  |                  |                     |         |
| 148                                     | 158 t                                   | 1681                                    | 215 t               | 236 t               | 278                 | 294                 | 3061                | 374 t               | 411                 | 423                                    | 452 (                                | 479                 | 501                 |                  |                  |                  |                  |          |                  |                  |                  |               |                  |          |                  |                  |                  |                     |         |
| Arg-                                    | Ser-                                    | Ala-                                    | His-                | Ser-                | Ala-                | Gly-                | Glu-                | Ser-                | Ala-                | Cys                                    | Thr-                                 | Glü                 | Gly.                |                  |                  |                  |                  |          |                  |                  |                  |               |                  |          |                  |                  |                  |                     |         |
|   |   |   |                     |                     |                     |                     | -                   |                     |                     |  |                                      |                     |                     |                  |                  |                  |                  |          |                  |                  |                  | •             |                  |          |                  |                  |                  |                     |         |
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| _                                       |   |   |                     |                     |                     |                     |                     |                     | -                   |  |                                      | -                   |                     |                  |                  |                  |                  |          |                  |                  |                  | <del></del> - |                  |          |                  |                  |                  |                     |         |
|   |   |   |                     |                     |                     |                     |                     |                     |                     |  |                                      |                     |                     |                  |                  |                  |                  |          |                  |                  |                  |               |                  |          |                  |                  |                  |                     |         |
|   |   |   |                     |                     |                     |                     |                     |                     |                     |  |                                      |                     |                     |                  |                  |                  |                  |          | •                |                  |                  |               |                  |          |                  |                  |                  |                     |         |
|   |   |   |                     |                     |                     |                     |                     | ,                   |                     |  |                                      |                     |                     |                  |                  |                  |                  |          |                  |                  | •                |               |                  |          |                  |                  |                  |                     |         |
|   |   |   |                     |                     |                     |                     |                     |                     |                     |  |                                      | a                   |                     |                  |                  |                  |                  |          |                  |                  |                  |               |                  |          |                  |                  |                  |                     |         |
|   |   |   |                     |                     |                     |                     |                     |                     | •                   |  |                                      |                     |                     |                  |                  |                  |                  |          |                  |                  |                  |               |                  |          |                  |                  |                  |                     |         |
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|  |   | 103950,<br>120580,<br>131440,<br>139130,<br>142680,<br>176260,   |
|  |   | 12p13  |
| L0439: 1, L0749: 1,<br>L0758: 1, L0759: 1 and<br>S0260: 1. | H0083: 17, H0556: 14, H0265: 7, L0794: 6, H0271: 5, H0543: 5, L0766: 4, L0809: 4, H0436: 3, H0635: 2, H0150: 2, S0114: 1, H0650: 1, H0645: 1, H0645: 1, H0648: 1, H0615: 1, H0438: 1, H0615: 1, H0438: 1, L0764: 1, L0803: 1, L0764: 1, L0657: 1, L0655: 1, L0657: 1, L0655: 1, L0659: 1, L0783: 1, L0790: 1, L0783: 1, L0790: 1, L0783: 1, L0790: 1, L0783: 1, L0790: 1, L0783: 1, L0655: 1, L0655: 1, L0655: 1, L0655: 1, L0659: 1, L0783: 1, L0790: 1, L0783: 1, L0790: 1, L0783: 1, L0790: 1, L0783: 1, H0670: 1, H0595: 1, H05423: 1 and H05423: 1 | L0749: 6, L0761: 4,<br>H0657: 3, S0142: 3,<br>L0766: 3, L0655: 3,<br>L0777: 3, L0599: 3,<br>H0556: 2, S0358: 2,<br>H0457: 2, L0769: 2,   |
|  |   | Pro-19 to Ala-24, L0749: 6, L0761: 4 Pro-57 to Asp-64, H0657: 3, S0142: 3, Pro-125 to His-138, L0766: 3, L0655: 3, Ser-177 to Ala-182, L0777: 3, L0599: 3, Asn-257 to Ala-266, H0556: 2, S0358: 2, Glu-275 to Asn-284, H0457: 2, L0769: 2, |
|  | 3085  | 3086   |
|  | 2 - 685   | 134 - 1996   |
|  | 910   | 911  |
|  | 1059692   | 1059710  |
| ·  | HTJMV05   | HOOIL70  |

| 190450,                                 | 200990,             | 216950,              | 600228,             | 600414,             | 600618,             | 960209              |                     |                         |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                        |           | 106100                |                       |                     |                     |                     |                     |                     |
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|   |                     |                      | ٠                   |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                        |           | 11q11                 |                       |                     |                     |                     |                     |                     |
| Arg-288 to Lys-303, L0794: 2, L0499: 2, | L0653: 2, L0776: 2, | ,L0659: 2, H0648: 2, | H0521: 2, H0555: 2, | L0747: 2, L0750: 2, | H0445: 2, H0650: 1, |                     |                     | <br>S0280: 1, H0274: 1, | H0050: 1, H0015: 1, | H0083: 1, H0688: 1, | H0606: 1, H0124: 1, | T0067: 1, S0002: 1, | S0426: 1, L0763: 1, | L0772: 1, L0771: 1, | L0784: 1, L0629: 1, | L0382: 1, L0663: 1, | L0665: 1, H0689: 1, | H0672: 1, H0522: 1, | H0436: 1, L0780: 1, | L0752: 1, L0731: 1 and | H0422: 1. | L0748: 19, L0754: 15, | H0046: 13, L0751: 10, | H0013: 8, S0152: 8, | H0623: 7, H0644: 6, | L0662: 6, L0666: 6, | L0438: 6, L0740: 6, | L0747: 6, S0358: 5, |
| Arg-288 to Lys-303,                     | Pro-340 to Lys-345, | Arg-378 to Cys-387,  | His-411 to Arg-419, | lle-462 to Ser-468, | Gln-553 to Ile-565, | Lys-577 to Val-589, | His-594 to Lys-621. |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | •         | Asn-1 to Asp-6,       | Pro-16 to Gly-22,     | Tyr-28 to Glu-34,   | Thr-44 to Val-57,   | Arg-96 to Pro-106,  | Leu-118 to His-123, | Pro-125 to Ser-146, |
|   |                     |                      |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                        |           | 3087                  |                       |                     |                     |                     |                     |                     |
|   |                     |                      |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 146 - 955             |                       |                     |                     |                     |                     |                     |
|   | ·                   |                      |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 912                   | •                     |                     |                     |                     | •                   |                     |
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|   |  |  | ·                                       | . <u>.</u>          |                     |                     |                     |                     | ж. |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     | _                   |
|   |  |  |   |                     |                     |                     |                     | <del></del>         |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    | ·                   |                     |
| 30476: 5, H0575: 5,                     | H0622: 5, L0659: 5,                    |  | 30440: 4, L0770: 4,                     | .0806: 4, L0776: 4, | .0439: 4, L0750: 4, | .0755: 4, L0731: 4, | S0442: 3, S0022: 3, | H0032: 3, H0591: 3, |    | H0144: 3, H0547: 3, | H0539: 3, S0390: 3, | S0028: 3, S0206: 3, | L0759: 3, L0591: 3, | H0624: 2, H0686: 2, | S0212: 2, S0282: 2, | H0662: 2, S0444: 2, | H0637: 2, S0045: 2, | H0619: 2, H0351: 2, | H0586: 2, H0486: 2, | H0042: 2, H0052: 2, | N0006: 2, H0015: 2, | H0039: 2, H0553: 2, | H0135: 2, H0488: 2, | H0646: 2, H0652: 2, | L0369: 2, L0627: 2, | L0764: 2, L0766: 2, | 0774: 2, L0653: 2, | .0565: 2, H0519: 2, | H0593: 2, L0742: 2, |
| Thr-151 to Gln-178, S0476: 5, H0575: 5, | Glu-199 to Leu-210, H0622: 5, L0659: 5 | Asp-217 to Tyr-237, L0758: 5, H0645: 4 | Val-245 to Tyr-251. S0440: 4, L0770: 4, |                     |                     | =                   | <u> </u>            |                     |    |                     | ,                   | <u> </u>            |                     |                     | <u> </u>            |                     |                     |                     |                     | <b>-</b>            |                     |                     |                     | <b>,</b>            | - <del></del> -     | <b></b>             |                    |                     |                     |
|   |  |  |   |                     |                     |                     |                     |                     |    |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |
|   |  |  |   |                     |                     |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    | •                   |                     |
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| ·                                       |  |  |   |                     |                     | •                   |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |
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| <u> </u>            |                     |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |
|                     |                     |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| .0743: 2, L0749: 2, | S0434: 2, S0436: 2, | 0596: 2, L0589: 2, | H0171: 1, H0713: 1, | H0717: 1, H0716: 1, | 10583: 1, H0650: 1, | H0657: 1, S0116: 1, | S0001: 1, H0661: 1, | H0663: 1, H0638: 1, | 0354: 1, H0722: 1, | S0132: 1, L0717: 1, | H0443: 1, S0222: 1, | 10431: 1, H0609: 1, | H0587: 1, H0331: 1, | H0632: 1, T0039: 1, | F0060: 1, H0069: 1, | 10635: 1, H0156: 1, | H0599: 1, H0118: 1, | .70082: 1, S0010: 1, | S0346: 1, T0048: 1, | H0374: 1, H0194: 1, | 10309: 1, H0545: 1, | H0563: 1, L0471: 1, | H0350: 1, H0014: 1, | H0051: 1, H0266: 1, | H0687: 1, S0003: 1, | H0688: 1, T0023: 1, | .0483: 1, H0031: 1, | .0055: 1, H0674: 1, | S0036: 1, H0038: 1, |
|                     | <u> </u>            | _ <del></del>      | <b>, 14</b>         | <u> </u>            |                     |                     |                     | <b></b>             | <u> </u>           | <u></u>             |                     | <u> </u>            | _==                 |                     |                     |                     | _=_                 |                      | <u> </u>            |                     | =                   |                     |                     |                     |                     |                     |                     | <u> </u>            | <u> </u>            |
|                     |                     |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |
|                     |                     |                    |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     | -                   |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                    |                     |                     | ٠.                  |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                    |                     | -                   |                     |                     | · ·                 |                     |                    |                     |                     | <u> </u>            |                     | ·                   |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| H0056: 1, H0026: 1, H0026: 1, H0056: 1, H0056: 1, H0056: 1, H0059: 1, T0069: 1, L0435: 1, L0435: 1, H00280: 1, H0039: 1, S0450: 1, S0450: 1, S0450: 1, S0450: 1, S0450: 1, L0435: 1, L0639: 1, L0639: 1, L0639: 1, L0639: 1, L0639: 1, L0639: 1, L0639: 1, L0649: 1, L0639: 1, L0650: 1, L0388: 1, L0649: 1, L0639: 1, L0650: 1, L0650: 1, L0650: 1, L0650: 1, L0650: 1, L0650: 1, L0650: 1, L0664: 1, L0639  |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          |          | _     |
|---|----------|-------|--------|--------|-------|----------|----------|------------|--------|--------|----------|----------|----------|--------|----------|-------|----------|----------|-------|-------|----------|-------|-------------|-------|----------|-------|-------|----------|----------|-------|
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          |          |       |
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          | •     |       |          |          |       |
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          |          |       |
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       | •        |       |       |          |          |       |
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          |          |       |
| H00616: 1, H00264; H0056: 1, H0056; H0056: 1, H0059; H0059: 1, S0386: 1, H0059; H0050: 1, S0386: 1, H0059; H0050: 1, H0059; H0050: 1, H0059; H0050: 1, H0059; H0050: 1, H0059; H0050: 1, H0059; H0050: 1, H0069; H0060: 1, H0069; H  | <b>-</b> | 1,    | •      |        | I,    | •        | •        | <u>_</u> , |        |        | _•       |          |          |        |          | ۍ.    |          | <u>,</u> | 1,    | 1,    |          | 1,    | <del></del> | 1,    | <u> </u> | ·     | ٦,    |          |          | 1 and |
| H0616; 1, H0 H076; 1, H0 H076; 1, H0 H078; 1, H0 H078; 1, L0 H078; 1, L0 L078; 1, L0 L078; 1, L0 L064; 1, L0 L078; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L065; 1, L0 L074; 1, L0 S001; 1, H0 S001; 1, H0 L052; 1, L0 S004; 1, S0 S024; 1, S0  | 264:     | 029:  | 386: 1 | 435: ] | 359:  | 438: 1   | 422: 1   | 529        | 763: ] | 796: ] | 363: ]   | 649:     | 388: ]   | 775: ] | 633:     | 809:  | 790:     |          | )684: | )660: | 380: 1   | 3696: | 436:        | 014:  | 752:     | 707   | 361:  | 192: 1   | 460: 1   | ¥46:  |
| H0616,<br>H0056,<br>T0069,<br>L0351,<br>S0344,<br>S0002,<br>L0540,<br>L0538,<br>L0561,<br>L0563,<br>L0638,<br>L0638,<br>L0638,<br>L0638,<br>L0638,<br>L0639,<br>R0435,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R03788,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R03788,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R03788,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R03788,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378,<br>R0378 | 1, HC    | 1, HC | 1, SO  | 1,10   | 1, HC | 1, S0    | 1, SQ    | 1, HO      | 1, LO  | 1, LO  | 1,10     | 1, LO    | 1, L0    |        | 1,10     | 1, LO | 1, LO    | 1, LO    | 1, H( | 1, H( | 1, S0    | 1, H( | 1, H0       | 1, S3 | 1,10     | 1, H0 | 1, LO | 1, S0    | 1, SO    | 1, S0 |
|   | 0616:    | 0056: | 3069:  | 3351:  | 0280: | 3450:    | 344:     | 3002:      | 3640:  | 3638:  | 3765:    | 3768:    | 0561:    | 0650:  | 0784:    | 0628: | 0519:    | 0663:    | 0520: | 0435: | 3378:    | 0522: | 0146:       | 0345: | 0744:    | 3031: | 0592: | 0011:    | 0242:    | .22   |
|   | Ħ.       | Ī     | Ĕ      | ĭ.     | İ     | <u>x</u> | <u>x</u> | 8          | ĭ      |        | <u> </u> | <u> </u> | <u> </u> |        | <u> </u> |       | <u> </u> | 그        | 耳     | 王     | <u>x</u> | 王     | S           | Ħ     | <u> </u> | Š     | ī     | <u>x</u> | <u> </u> | 王     |
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          |          |       |
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          | , ,      |       |
|   | •        |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          |          |       |
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       | <del></del> |       |          |       |       |          | -        |       |
|   |          | _     |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       | _     |          |          |       |
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             | -     |          |       |       |          |          |       |
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          |          |       |
|   | •        |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       | ι        |       |             |       |          |       |       |          |          |       |
|   |          |       |        |        |       |          |          |            |        |        |          | •        |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          |          |       |
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          |          |       |
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          |          | -     |
|   |          |       |        |        |       |          |          |            |        |        | -        |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          |          |       |
|   |          |       |        |        |       |          |          |            |        |        |          |          |          |        |          |       |          |          |       |       |          |       |             |       |          |       |       |          |          | ٠.    |

|           |                   |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     | <del>-</del>        |                     |                     |
|-----------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|           | 106165,           | 117700,             | 117700,             | 126451,             | 150210,             | 169600,             | 180380,               | 180380,             | 180380,             | 190000,             | 203500,             | 232050,             | 276902,             | 600882,             | 601199,             | 601199,             | 601199,             | 601471,             | 601682              | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 3q13.3-q21        |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0008: 1. |                   | AR089: 3, AR061: 3, | AR053: 2, AR033: 2, | AR060: 2, AR039: 1, | AR104:              | H0599: 2            | L0750: 14, L0754: 13, | L0766: 8, L0776: 8, |                     |                     | L0769: 4, L0779: 4, | L0777: 4, S0420: 3, | L0770: 3, L0755: 3, | L0758: 3, L0471: 2, | L0771: 2, L0775: 2, | L0806: 2, L0659: 2, | S0126: 2, H0670: 2, | L0743: 2, L0759: 2, | L0604: 2, H0624: 1, | H0685: 1, H0650: 1, | H0484: 1, H0483: 1, | H0661: 1, S0358: 1, | S0360: 1, S0046: 1, | H0411: 1, H0632: 1, | H0427: 1, S0280: 1, | H0097: 1, H0004: 1, | S0049: 1, H0024: 1, | H0028: 1, H0622: 1, | L0142: 1, H0708: 1, |
|           | Pro-81 to Lys-89, | Cys-91 to Leu-100,  | Asp-103 to Ile-110, | Pro-179 to Pro-184, | Arg-194 to Met-199, | Pro-203 to Arg-213, | Pro-249 to Ala-262,   | Ser-274 to Glu-279, | Asp-301 to Trp-309, | Pro-335 to Ser-343. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |
|           | 3088              |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 2 - 1081          |                     |                     |                     |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | 913               |                     |                     | •                   |                     |                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |
|           | 1059764           |                     |                     |                     |                     |                     |                       |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|           | HTPHO01           |                     |                     |                     |                     |                     |                       | -                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |

|  |  | 118504,<br>118504,<br>131242,<br>139320,<br>139320,<br>139320,<br>602025,<br>602235  |
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|  |  | 20q13.2-<br>q13.3  |
| H0591: 1, L0763: 1,<br>L0772: 1, L0800: 1,<br>L0764: 1, L0662: 1,<br>L0768: 1, L0794: 1,<br>L0807: 1, L0774: 1,<br>L0666: 1, L0665: 1,<br>S0148: 1, S0328: 1,<br>S0406: 1, S3014: 1,<br>S0027: 1, S0028: 1,<br>H0667: 1. | S0001: 1, H0125: 1,<br>H0580: 1, H0581: 1,<br>H0457: 1, H0428: 1,<br>L0627: 1, H0521: 1 and<br>L0749: 1. | L0748: 19, L0758: 6,<br>L0794: 5, L0766: 5,<br>L0749: 4, H0038: 3,<br>H0520: 3, H0288: 2,<br>H0551: 2, L0665: 2,<br>L0438: 2, H0547: 2,<br>H0659: 2, L0591: 2,<br>L0595: 2, H0177: 1,<br>S0418: 1, S0046: 1,<br>H0393: 1, L0717: 1,<br>H0393: 1, L0717: 1, |
| # T T T T T T & & & T #  |  | Asp-19 to Ile-26, Lys-86 to Leu-96, Pro-108 to Leu-119, I Ser-121 to Gln-144, F Ser-243 to Ala-251, E Pro-299 to Thr-305, F Asn-349 to Ser-359, I Leu-381 to Pro-389, F Asn-403 to Ser-420. I Ser-420. I   |
|  | 3089   | 3090   |
|  | 206 - 496  | 8 - 1267   |
|  | 914  | 915  |
|  | 1059784  | 1059849  |
|  | НЪРWК69  | нРСОК03  |

|  | 102772,<br>106210,<br>106210,<br>106210,<br>107271,<br>114550,<br>115500,<br>115500,<br>115500,<br>1179615,<br>179615,<br>179616,<br>180385,   |
|--|--|
|  | 11p13  |
| F0110: 1, H0553: 1,<br>H06412: 1, H0413: 1,<br>H0623: 1, S0112: 1,<br>F0042: 1, H0529: 1,<br>L0646: 1, L0769: 1,<br>L0666: 1, L0769: 1,<br>L0657: 1, L0787: 1,<br>L0789: 1, H0702: 1,<br>H0684: 1, H0648: 1,<br>S0152: 1, H0522: 1,<br>H0626: 1, L0777: 1,<br>L0747: 1, L0777: 1,<br>L0667: 1. | L0754: 10, H0251: 9,<br>L0591: 9, S0212: 8,<br>S0003: 7, L0771: 7,<br>S0192: 7, L0805: 6,<br>H0616: 5, L0776: 5,<br>H0689: 5, L0747: 5,<br>L0777: 5, L0757: 5,<br>L0777: 5, L0757: 5,<br>L0771: 4, H0124: 4,<br>H0551: 4, H0413: 4,<br>L0769: 4, L0517: 4,<br>S0126: 4, S3014: 4,<br>L0756: 4, L0517: 4,<br>S0126: 4, S3014: 4,<br>L0756: 4, L055: 4,  |
|  | Pro-26 to Ser-35, Lys-46 to Arg-63, Lys-46 to Arg-63, Losyl: 9, S0212: 8, Ile-71 to Asp-76, Lys-105 to Ile-115, S0192: 7, L0805: 6, Glu-119 to Tyr-125, His-136 to His-141, H0689: 5, L0776: 5, Leu-148 to Arg-154, L0777: 5, Leu-148 to Glu-170, Loysli: 4, H0124: 4, Asp-194 to Gly-201, S0420: 4, S0360: 4, Glu-216 to Pro-222, L0471: 4, H0124: 4, Ser-227 to Phe-232, Arg-236 to Glu-248, L0769: 4, L0517: 4, Ala-297 to Leu-311. L0756: 4, L0755: 4, L0755: 4, |
|  | 3091   |
|  | 3 - 935  |
|  | 916  |
|  | 1059852  |
|  | HVVBP14  |

| 194070,             | 245349              |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| H0575: 3, H0031: 3, | L0665: 3, H0658: 3, | S0406: 3, S0027: 3, | L0439: 3, L0751: 3, | L0745: 3, L0749: 3, | L0750: 3, L0779: 3, | L0753: 3, L0758: 3, | H0171: 2, T0049: 2, | H0663: 2, S0418: 2, | 80356: 2, 80358: 2, | H0632: 2, H0486: 2, | L0477: 2, T0039: 2, | H0013: 2, H0421: 2, | H0544: 2, H0023: 2, | S0022: 2, S0214: 2, | H0615: 2, H0553: 2, | H0032: 2, H0135: 2, | H0591: 2, H0264: 2, | H0412: 2, H0647: 2, | L0659: 2, L0540: 2, | L0783: 2, L0530: 2, | L0789: 2, L0663: 2, | L0664: 2, H0144: 2, | S0374: 2, H0682: 2, | H0435: 2, H0672: 2, | S3012: 2, L0752: 2, | S0434: 2, L0592: 2, | L0581: 2, S0026: 2, | S0194: 2, S0424: 2, |
|                     |                     |                     | . ,                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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| .0411: 1, H0556: 1, | F0002: 1, H0685: 1, | 040: 1, H0295: 1, | H0341: 1, H0661: 1, | S0354: 1, S0408: 1, | [0008: 1, S0132: 1, | H0393: 1, H0640: 1, | )411: 1, H0437: 1, | H0549: 1, H0550: 1, | S0222: 1, H0431: 1, | H0455: 1, H0559: 1, | H0485: 1, H0599: 1, | S0010: 1, H0309: 1, | H0596: 1, L0738: 1, |             | H0123: 1, H0620: 1, | H0024: 1, H0266: 1, | 00006: 1, H0644: 1, | .0142: 1, H0628: 1, | .0455: 1, S0015: 1, | H0560: 1, H0561: 1, | S0440: 1, H0641: 1, | S0142: 1, L0598: 1, | H0529: 1, L0770: 1, | _0639: 1, L0637: 1, | .0374: 1, L0521: 1, | .0794: 1, L0766: 1, | .0784: 1, L0806: 1, | .0655: 1, L0526: 1, | .0519: 1, L0529: 1, |
| 07]                 | <u>T</u> 0          | OS S              | H                   | 0S                  | OT.                 | H                   | H                  | H                   | <u>S0</u>           | H                   | H                   | 0 <u>S</u>          | )H                  | )H          | )H                  | H                   | TO                  |                     | 2                   | )H                  | SO<br>SO            | <u>s</u>            | H                   | 07                  | <u> </u>            | 3                   | 3                   | <u>91</u>           | 07]                 |
|                     |                     |                   |                     |                     |                     |                     |                    |                     |                     | <del></del>         |                     |                     |                     |             |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
|                     |                     |                   | ٠                   |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     | <del>-</del>      |                     | - · ·               |                     |                     | -                  |                     |                     | ·                   |                     |                     |                     |             |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     | <del></del>         | <del></del>         |                     |
|                     |                     |                   |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     | <del></del> |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |
|                     |                     |                   |                     | ,                   | •                   | -                   |                    |                     |                     |                     |                     |                     |                     |             |                     |                     |                     |                     | 4                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                       |                     |                     | •                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0541: 1, L0647: 1, | L0788: 1, L0666: 1, ` | L0565: 1, S0148: 1, | H0520: 1, H0690: 1, | H0659: 1, H0648: 1, | H0651: 1, S0328: 1, | S0330: 1, S0380: 1, | H0710: 1, H0709: 1, | H0696: 1, H0704: 1, | S0146: 1, H0555: 1, | H0478: 1, S0390: 1, | S0028: 1, L0740: 1, | L0739: 1, L0780: 1, | H0444: 1, S0308: 1, | H0343: 1, H0595: 1, | L0605: 1, L0608: 1, | L0595: 1, S0011: 1, | H0653: 1 and H0506: 1. | L0747: 4, L0764: 3, | H0648: 3, H0624: 2, | H0673: 2, L0665: 2, | L0748: 2, L0758: 2, | H0171: 1, H0556: 1, | H0351: 1, L0021: 1, | H0318: 1, H0545: 1, | H0354: 1, H0616: 1, | L0763: 1, L0769: 1, | L0667: 1, L0773: 1, | L0766: 1, L0804: 1, | L0659: 1, L0666: 1, |
|                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del>,-</del> -     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|                     |                       |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                        | 3092                |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                       |                     |                     | :                   |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1077 - 298          |                     |                     |                     | 1                   |                     |                     |                     |                     |                     | ,                   |                     |
|                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 917                 |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |
|                     |                       |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                        | 1059967             | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HOOJC15             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

| <del></del>  | ······································   |   |                                  |   |  |
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|  |  |   | 600259,<br>600259                |   |  |
|  | ·  |   | 7p22                             |   |  |
| H0547: 1, H0519: 1,<br>H0690: 1, H0658: 1,<br>S0378: 1, S0146: 1,<br>L0740: 1, L0589: 1 and<br>S0106: 1. | Gln-1 to Leu-9, S0003: 3, L0776: 2, Thr-21 to Phe-26, S0040: 1, H0587: 1, Leu-49 to Arg-62, S0010: 1, H0328: 1, Thr-114 to Asp-120, H0615: 1, H0551: 1, Arg-132 to Ser-140, T0042: 1, H0549: 1, Gln-148 to Trp-155, L0657: 1, H0519: 1, Pro-192 to Asn-198, S0328: 1, H0539: 1, Lys-235 to Asp-241, L0758: 1, L0608: 1 and Tyr-256 to Trp-266, S0194: 1. Ser-297 to Lys-304, Val-326 to Val-331. | H0617: 2, H0618: 1,<br>S0052: 1 and H0593: 1.               | L0766: 1, H0684: 1 and H0542: 1. | H0615: 2, H0580: 1,<br>H0024: 1, H0428: 1,<br>L0804: 1, H0670: 1,<br>H0651: 1 and L0756: 1. | H0650: 1, H0656: 1,<br>H0618: 1, H0290: 1,<br>H0551: 1, H0477: 1,<br>S0450: 1, H0547: 1, |
|  | Gln-1 to Leu-9, S0003: 3, L0776: Thr-21 to Phe-26, S0040: 1, H0587: Leu-49 to Arg-62, S0010: 1, H0328: Thr-114 to Asp-120, H0615: 1, H0551: Arg-132 to Ser-140, T0042: 1, H0494: Gln-148 to Trp-155, L0657: 1, H0519: Pro-192 to Asn-198, S0328: 1, H0539: Lys-235 to Asp-241, L0758: 1, L0608: Tyr-256 to Trp-266, S0194: 1. Ile-273 to Glu-283, Ser-297 to Lys-304, Val-326 to Val-331.        | Pro-19 to Glu-24,<br>Ala-66 to Arg-71,<br>Pro-81 to Tyr-88. | Lys-30 to Phe-36.                |   | Gly-18 to Glu-23.  |
|  | 3093   | 3094  | 3095                             | 3096  | 3097   |
|  | 182 - 1213   | 2 - 265   | 447 - 635                        | 1380 -<br>1282  | 3 - 1514   |
|  | 918  | 616   | 920                              | 921   | 922  |
|  | 1059969  | 1060137   | 1060193                          | 1060382   | 1060391  |
|  | HODFG47  | HBIPC05   | HOPJJ32                          | HNOBN20   | HOCPX74  |

|                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       | 113721,             | 247200,             | 600059,             | 601545              |                     |
|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                       | 17p13.3             |                     |                     | 1                   |                     |
| H0684: 1. H0660: 1. | L0751: 1 and H0543: 1. | L0766: 7, L0803: 5, | L0809: 5, L0779: 5, | L0756: 4, S0380: 3, | L0439: 3, L0759: 3, | S0442: 2, H0031: 2, | H0591: 2, H0616: 2, | L0789: 2, L0438: 2, | L0754: 2, L0755: 2, | L0731: 2, L0758: 2, | H0171: 1, H0657: 1, | L2250: 1, H0024: 1, | H0169: 1, H0372: 1, | L0769: 1, L0637: 1, | L0774: 1, L0805: 1, | L0776: 1, L0527: 1, | L0666: 1, S0374: 1, | L0352: 1, H0547: 1, | H0670: 1, H0660: 1, | H0648: 1, H0539: 1, | H0522: 1, L0748: 1, | L0752: 1, H0445: 1, | H0667: 1 and H0543: 1 | S0388: 5, H0594: 4, | S0282: 3, H0598: 3, | S0344: 3, S0136: 3, | H0395: 2, S0280: 2, | H0597: 2, S0194: 2, |
|                     |                        | Ala-67 to Tyr-72,   | Glu-75 to Asn-81,   | Glu-176 to Lys-187. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       | Lys-10 to Ser-19.   |                     |                     |                     |                     |
| -                   |                        | 3098                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       | 3099                |                     |                     |                     |                     |
|                     |                        | 12 - 605            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                       | 218 - 292           |                     |                     |                     |                     |
|                     |                        | 923                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       | 924                 |                     |                     | ,                   |                     |
|                     |                        | 1060415             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                       | 1060495             |                     |                     | <del>-</del> ;      |                     |
|                     |                        | HTEPP27             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       | HLYAJ79             |                     |                     |                     |                     |

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|  | 106300,<br>108800,<br>120290,<br>120290,<br>120810,<br>120820,<br>142857,<br>142858,<br>150270,<br>177900,<br>177900,<br>177900,<br>2217000,<br>222100,<br>222100,<br>235200,<br>235200,<br>256550,<br>600261,<br>601868,  | 602280,             |
|  | 6p21.3   |                     |
| H0543: 2, H0510: 1,<br>H0316: 1, S0036: 1,<br>H0538: 1, S0260: 1,<br>H0445: 1, H0595: 1 and<br>S0412: 1. | L0665: 6, L0740: 6,<br>L0659: 5, L0774: 4,<br>L0775: 4, L0518: 4,<br>L0748: 4, L0754: 4,<br>L0749: 4, S0376: 3,<br>S0002: 3, L076: 3,<br>L0766: 3, L0776: 3,<br>L0766: 3, L0751: 3,<br>L0747: 3, L0752: 3,<br>L0768: 2, L0640: 2,<br>L0768: 2, L0662: 2,<br>L0768: 2, L0662: 2,<br>L0755: 2, L0757: 2,<br>L0755: 2, L0757: 2,<br>L0757: 1, L0662: 1,<br>L0772: 1, L0642: 1,<br>L0772: 1, L0642: 1,<br>L0764: 1, L0642: 1,<br>L0764: 1, L0663: 1,<br>L0767: 1, L0663: 1,<br>L0764: 1, L0664: 1,<br>L07528: 1, L0664: 1, | H0689: 1, H0670: 1, |
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|  | 1060656  |                     |
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| 602475              |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |   |                     |                     |                     |                     |                     |                     | 1                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0651: 1, H0521: 1, | L0744: 1, L0439: 1,<br>L0731: 1 and L0605: 1. | L0805: 9, L0776: 8, | H0585: 7, L0731: 7, | L0751: 3, L0747: 3, | S0282: 2, H0606: 2, | H0038: 2, L0769: 2, | L0803: 2, L0809: 2, | H0690: 2, L0777: 2, | L0752: 2, L0758: 2, | L0601: 2, H0170: 1, | S0358: 1, S0360: 1, | S0007: 1, S0476: 1, | S0278: 1, H0370: 1, | H0559: 1, L0622: 1, | L0623: 1, T0114: 1, | H0427: 1, L0021: 1, | H0204: 1, H0086: 1, | H0178: 1, S0051: 1, | H0688: 1, H0213: 1, | H0163: 1, H0087: 1, | H0494: 1, S0440: 1, | L0535: 1, L3904: 1, | L0764: 1, L0662: 1, | L0794: 1, L0774: 1, | L0375: 1, L0376: 1, | L0657: 1, L0526: 1, | L0783: 1, L0383: 1, | L0787: 1, H0144: 1, |
|                     |   | Tyr-23 to Arg-29,   | Gln-57 to Cys-65,   | Cys-164 to Trp-169. | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |   | 3101                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |   | 1-618               |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |
|                     |   | 976                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |   | 1060711             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |   | HWMGI51             |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     | •                   |                     |                     |                     |                     |

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|                     |                     |                     |                     |                        |                     |                     |                        |                    |                   |                   |                   |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     | ı                   | -                   |                     |                     |                     |
| H0660: 1, H0696: 1, | S0044: 1, L0740: 1, | L0750: 1, L0780: 1, | S0436: 1, H0667: 1, | H0423: 1 and S0424: 1. | H0208: 1, H0024: 1, | H0038: 1, L0776: 1, | H0658: 1, H0521: 1 and | H0665: 1.          |                   |                   |                   | L0771: 9, H0436: 6, | H0494: 4, L0761: 4, | L0789: 4, L0743: 4, | H0656: 3, H0581: 3, | L0764: 3, H0543: 3, | H0580: 2, H0427: 2, | H0538: 2, L0769: 2, | L0806: 2, H0699: 2, | H0689: 2, H0521: 2, | L0755: 2, H0583: 1, | H0341: 1, H0483: 1, | H0662: 1, H0550: 1, | S0222: 1, H0392: 1, | H0486: 1, S0250: 1, | H0488: 1, S0426: 1, | L0800: 1, L0662: 1, | L0768: 1, L0794: 1, | L0766: 1, L0803: 1, |
|                     |                     |                     |                     |                        | Cys-38 to Thr-45,   | Ser-69 to Asp-79,   | Leu-81 to Gly-89,      | Pro-97 to Leu-103. | Pro-10 to Arg-15, | Gly-45 to Trp-57, | Gly-77 to Pro-88. | Gln-1 to Arg-14,    | Leu-21 to Arg-32,   | Cys-44 to Cys-57.   | •                   |                     | `                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        | 3102                |                     |                        |                    | 3103              |                   |                   | 3104                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        | 555 - 863           |                     | ,                      |                    | 801 - 1259        |                   |                   | 1 - 1302            |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        | 726                 |                     |                        |                    | 928               |                   |                   | 929                 |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                        | 1060780             |                     |                        |                    | 1060967           |                   |                   | 1060972             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | ,                   |                     |                     | ,                      | HDPJG33             |                     |                        |                    | HLYAE20           | •                 |                   | HKZAR86             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|   |                  |   |                     |                     |                     | _                                       |                     |                     |                     |                                      |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|   |                  |   |                     |                     |                     |   |                     |                     |                     |                                      |   |   |   |   |                     | -                   |                     |                     |                     |                     |                     |                     |                     |
| L0659: 1, S0374: 1,<br>H0547: 1, H0593: 1,<br>S0126: 1, H0435: 1,<br>S0152: 1, L0780: 1,<br>L0757: 1, L0758: 1,<br>H0423: 1 and H0422: 1. | O EFECT O HIVOAR | H0617: 8, L0747: 8, 10769: 6, 1,0665: 5 | L0758: 5, L0717: 4, | L0794: 4, L0766: 4, |                     | H0181: 3, H0494: 3,                     | L0638: 3, L0666: 3, | H0658: 3, L0750: 3, | L0757: 3, H0657: 2, | H0255: 2, H0431: 2,                  | H0318: 2, H0328: 2,                     | T0006: 2, H0396: 2,                     | S0426: 2, L0770: 2,                     | Glu-564 to Thr-573, L0771: 2, L0375: 2, | L0805: 2, L0657: 2, | L0384: 2, H0659: 2, | L0744: 2, L0756: 2, |                     | L0596: 2,           | L0599: 2, L0593: 2, | S0026: 2, H0265: 1, | H0685: 1, H0341: 1, | H0663: 1, S0418: 1, |
|   | 70 00 10         | Glu-22 to Ser-36,<br>Glv-43 to Asn-74   | Leu-83 to Leu-90,   | Glu-97 to Thr-106,  | Pro-135 to Arg-140, | Lys-188 to Arg-201, H0181: 3, H0494: 3, | Asp-330 to Asp-     | 336,                | Thr-371 to Ser-381, | Asp-413 to Trp-418, H0255: 2, H0431: | Tyr-454 to Lys-461, H0318: 2, H0328: 2, | Gly-474 to Cys-479, 10006: 2, H0396: 2, | Gly-511 to Asp-516, 80426: 2, L0770: 2, | Glu-564 to Thr-573,                     | Phe-640 to Ala-662, | Arg-700 to Leu-706, | Ala-737 to Tyr-743, | Pro-800 to Gln-806, | Ala-876 to Thr-881, | Arg-921 to Leu-928. |                     |                     |                     |
|   | 3105             | 3-106                                   |                     |                     |                     |   |                     |                     |                     |                                      |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ·   | 65 298           | 3034 - 251                              |                     |                     |                     |   |                     |                     |                     |                                      |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 930              | 931                                     |                     |                     |                     |   |                     |                     |                     |                                      |   |   |   |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 1061036          | 1061180                                 |                     |                     |                     |   |                     |                     |                     |                                      |   |   |   |   | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |
|   | HAOTX62          | нососэя                                 |                     | ,                   |                     |   |                     |                     |                     |                                      |   |   |   |   |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |

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| ļ-,              | ť                  | : 1,             | <del>-</del>     | 1,               | <del>,</del>     | <br>             | . <del>1</del> , | <del>-</del> - | .;<br>.;         | : <del>1</del>   | <br>T            | . T,      | 1.               | : 1,             |          | 1,                 | 1,       | 1,          | .1,      | <del>,</del>      | <del>.</del> ;   | . T              | i: 1,            | .;<br>              | <u>_</u>           | 1,               | : 1,             | : 1,             | : 1,      |
| 358:             | 132:               | 0550             | 441              | 3021;            | 048:             | 6000             | 0483             | H0628:         | 0674             | 0551             | 900              | L0351: 1  | 0560             | 0344             | 3501     | 3764               | L0803: 1 | 9080        | L0656:   | 3790              | 3565             | 0547             | 0435             | 0672                | 3406               | 0742             | 0740             | 3754             | L0752:    |
| 1, SC            | 1, SC              | 1, H             | 1, H(            | 1, Ľ             | 1, T(            | 1, H             | 1, L             | 1, H           | 1, H             | 1, H             | 1, T             | 1, L      | 1, H             | 1, S             | 1, L     | 1,1                | 1, L     | 1, L        |          | 1,1               | 1, L             | 1, H             | 1, H             | 1, H                | 1, S(              | 1, L             | 1, L             | 1, L             | 1, L      |
| S0356: 1, S0358: | S0360: 1, S0132: 1 | H0411: 1, H0550: | 30222: 1, H0441: | .0477: 1, L0021: | 30346: 1, T0048: | H0309: 1, H0009: | H0172: 1, L0483: | H0031: 1,      | H0673: 1, H0674: | 10040: 1, H0551: | H0412: 1, T0004: | H0102: 1, | H0280: 1, H0560: | 10633: 1, S0344: | 762:     | L0372: 1, L0764: 1 | 0768: 1, | .0650: 1, ] | 0776: 1, | .0783: 1, L.0790: | ,2269: 1, L0565: | .0438: 1, H0547: | H0689: 1, H0435: | H0660: 1, H0672: 1, | S0330: 1, S0406: 1 | H0576: 1, L0742: | .0439: 1, L0740: | .0751: 1, L0754: | .0749: 1, |
| 80               | 80                 | 王                | <u>8</u>         | <u> </u>         | <u>8</u>         | H                | Ħ                | 王              | H                | Ħ                | Ħ                | 王         | H                | 耳                | <u> </u> | 3                  | 2        | <u> </u>    | 3        | 3                 | 2                | 3                | Ħ                | Ħ                   | <u>S</u>           | 耳                | <u> </u>         | <u> </u>         | <u> </u>  |
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| L0755: 1, L0731: 1,<br>S0031: 1, H0445: 1,<br>L0587: 1, L0592: 1,<br>L0485: 1, L0595: 1,<br>L0601: 1, H0668: 1,<br>S0192: 1 and S0194: 1. | H0415: 2  | H0436: 65, H0521: 11, S0422: 9, L0439: 9, S0360: 8, L0754: 8, L0471: 7, H0581: 6, L0521: 6, H0520: 5, H0519: 5, H0171: 4, S0003: 4, H0529: 4, L0663: 4, L0664: 4, H0544: 4, H0547: 4, H0539: 4, L0581: 4, L0362: 4, L0581: 4, L0362: 4, L0581: 4, L0362: 3, H0657: 3, S0444: 3, S0049: 3, H0653: 3, H0628: 3, H0653: 3, H0648: 3, H0653: 3, H06413: 3, L0774: 3, S04413: 3, L0774: 3, S04413: 3, H0413: 3, L0774: 3, S044413: 3, L0774: 3, S044413: 3, L0774: 3, S |
|---|---|--|
| <u> </u>  | Asp-78 to Gly-84,<br>Glu-112 to Cys-117,<br>Glu-202 to Val-207,<br>Ser-219 to Ser-234,<br>Pro-237 to Lys-252. |  |
|   | 3107  | 3108   |
|   | 131 - 925   | 966 - 2816   |
|   | 932   | 933  |
|   | 1061185   | 1061238  |
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| 8: 3,              | 8: 3,              | 3,                  | 2: 3,            | 3:3,                | 1:2,                | 8: 2,               | 3: 2,               | 6: 2,               | 8: 2,               | 7:2,                | 1: 2,               | 5: 2,               | 0:2,                | 3: 2,               | 5: 2,               | 7: 2,               | <del>1</del> ; 2,   | 2: 2,            | ?;<br>2,            | 5: 2,               | 8: 2,               | 8: 2,               | 5:2,               | 2: 2,               | 4: 2               | 6: 1,              | 7: 1,            | 3: 1,              | 1: 1,           |
| H065               | H051               | 1007                | L075             | H054                | S000                | <b>S041</b>         | H039                | H058                | H031                | H045                | <b>S005</b>         | L045                | H056                | L059                | L077                | L051′               | S037                | H067             | T0603               | H055                | L075                | 1060                | <b>S00</b> 2       | H054                | S042               | H068               | H071             | H058               | H067            |
| .0659: 3, H0658: 3 | S0380: 3, H0518: 3 | .0748: 3, L0779: 3, | .0777: 3, L0752: | H0445: 3, H0543: 3, | H0341: 2, S0001: 2, | H0669: 2, S0418: 2, | S0420: 2, H0393: 2, | S0222: 2, H0586: 2, | H0427: 2, H0318: 2, | H0046: 2, H0457: 2, | H0373: 2, S0051: 2, | 10615: 2, L0455: 2, | H0040: 2, H0560: 2, | S0208: 2, L0598: 2, | .0369: 2, L0776: 2, | .0655: 2, L0517: 2, | .0665: 2, S0374: 2, | H0660: 2, H0672: | S0378: 2, L0602: 2, | S0152: 2, H0555: 2, | ,0756; 2, L0758; 2, | ,0599; 2, L0608; 2, | 0594: 2, S0026: 2, | S0192: 2, H0542: 2, | H0423: 2, S0424: 2 | H0170: 1, H0686: 1 | S0040: 1, H0717: | H0716: 1, H0583: 1 | H0656: 1, H0671 |
| 907                | S03                | <u>2</u>            | <u>1</u> 02      | H0H                 | H03                 | H06                 | <u>8</u>            | S02.                | H04                 | H00                 | H03                 | H06                 | 00H                 | <b>S0</b> 2         | <u> </u>            | <u>10</u>           | <u>106</u>          | H06              | <u>S</u> 03,        | S01.                | 102                 | 105                 | <u>105</u>         | S01                 | H04                | H01                | <u> </u>         | H07                | 90H             |
|                    |                    |                     |                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                    |                     |                    |                    |                  |                    |                 |
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| L                  |                    |                     | -                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                  |                     |                     |                     |                     |                    |                     |                    |                    |                  |                    |                 |
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| , Н0638: 1, | 442: 1,          | 735: 1,      | 619: 1,            | 300: 1,            | 369: 1,      | 0612: 1,         | 0587: 1,         | )586: 1,         | 0156: 1,         | 0421: 1,         | 0263: 1,         | )597: 1,         | 0620: 1,         | 0083: 1,         | 5028: 1,         | 250: 1,          | 328: 1,          | 0124: 1,         | 0400: 1,         | l, H0038: 1, | 0551: 1,         | )623: 1,         | 564: 1,      | 0042: 1,         | 0625: 1,         | 0065: 1,         | 150: 1,          | 0638: 1,         | 0641: 1,           |
| H0663: 1, H | L0005: 1, S0442: | S0354: 1, HC | S0045: 1, H0619: 1 | S6026: 1, S0300: 1 | H0175: 1, H( | H0431: 1, H0612: | H0592: 1, H0587: | H0331: 1, L0586: | H0635: 1, H0156: | H0098: 1, H0421: | H0309: 1, H0263: | T0110: 1, H0597: | N0006: 1, H0620: | T0010: 1, H0083: | H0375: 1, S6028: | H0687: 1, S0250: | S0214: 1, H0328: | H0622: 1, H0124: | H0598: 1, H0400: | H0163: 1, H  | H0063: 1, H0551: | T0067: 1, H0623: | S0038: 1, LC | L0370: 1, T0042: | H0494: 1, H0625: | H0561: 1, L0065: | S0440: 1, S0150: | H0641: 1, L0638: | L0667: 1, L0641: 1 |
| /           |                  |              |                    |                    |              |                  |                  |                  |                  |                  |                  | •                |                  |                  |                  |                  |                  |                  |                  |              |                  |                  |              |                  |                  |                  |                  |                  |                    |
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|             |                  |              |                    |                    |              |                  |                  | · · · · · ·      |                  | <del></del> .    |                  |                  | :                |                  |                  | <del></del>      |                  |                  |                  |              |                  |                  |              |                  |                  |                  |                  |                  |                    |
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| .0773: 1, L0648: 1, | .0662: 1, L0768: 1, | .0794: 1, L0766: 1, | 0803: 1, L0775: 1, | .0378: 1, L0806: 1, | .0654: 1, L0526: 1, | .0519: 1, L0789: 1, |          | H0699: 1, L0565: 1, | .0438: 1, H0435: 1, | S0406: 1, S0392: 1, | HO478: 1, L0742: 1, | .0740: 1, L.0747: 1, | .0750: 1, L0753: 1, | .0731: 1, S0434: 1, | S0436: 1, L0590: 1, | .0592: 1, L0604: 1, | .0366: 1, H0668: 1, | H0653: 1, H0667: 1, | H0422: 1 and S0412: 1. | L0731: 9, H0424: 6, | .0754: 6, L0758: 5, | L0662: 4, L0748: 4,   | L0747: 4, L0749: 4,   | L0623: 3, S0050: 3, | H0038: 3, H0616: 3, | .0659: 3, L0485: 3, | H0685: 2, H0255: 2, | H0642: 2, H0031: 2, | .0657: 2, L0439: 2, |
|                     | 크                   | <u> </u>            | <u> </u>           | <u> </u>            | ĭ                   | <u> </u>            | <u>1</u> | Ħ                   | ì                   | <u>X</u>            | 互                   | 3                    | ĭ                   | <u> </u>            | <u>X</u>            | <u> </u>            | <u> </u>            | H                   | H                      | Arg-17 to Gly-46,   | <u></u>             | Glu-137 to Pro-149, L | Glu-179 to Gly-185, L |                     | _                   | Ā                   | H                   | H                   | ī                   |
|                     |                     |                     |                    |                     |                     |                     |          |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     | •                      | 3109                |                     |                       |                       |                     | -                   |                     |                     |                     |                     |
|                     |                     |                     |                    | •                   |                     |                     |          |                     | ٠                   |                     |                     |                      |                     |                     |                     |                     |                     |                     |                        | 650 - 1276          |                     |                       |                       |                     | <del></del>         |                     |                     |                     |                     |
|                     |                     |                     |                    |                     |                     |                     |          |                     |                     |                     |                     |                      | •                   |                     |                     |                     |                     |                     |                        | 934                 |                     | -                     |                       |                     |                     |                     |                     |                     |                     |
| ,                   |                     |                     |                    |                     | -                   |                     |          |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                        | 1061258             |                     |                       |                       |                     |                     |                     |                     |                     |                     |
|                     |                     | ,                   |                    |                     |                     |                     |          |                     |                     | ,                   |                     |                      |                     |                     |                     |                     |                     |                     |                        | HVVBK70             |                     |                       |                       |                     |                     |                     |                     |                     |                     |

|  |                     |      |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |                      |                     |                     |                     |                     | ·                   |
|--|---------------------|------|---------------------|---------------------|----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |                     |      | ,                   |                     |    |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     | · · · · · ·         |                     |                        | 103050,              | 103050,             | 124030,             | 124030,             | 138981,             | 182380,             |
|  |                     | ···· |                     |                     |    |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                        | 22q13.1              |                     |                     |                     |                     |                     |
| L0779: 2, L0599: 2,<br>L0604: 2, H0171: 1, | H0657: 1, H0671: 1, |      | H0333: 1, L0622: 1, | H0486: 1, H0013: 1, | Τ, | H0594: 1, H0266: 1, | H0687: 1, H0688: 1, | H0213: 1, H0553: 1, | H0135: 1, H0090: 1, | H0059: 1, H0494: 1, | H0646: 1, H0529: 1, | L0763: 1, L0639: 1, | L0772: 1, L0764: 1, | L0375: 1, L0806: 1, | L0509: 1, L0783: 1, | L0532: 1, S0428: 1, | H0144: 1, H0658: 1, | H0672: 1, S0330: 1, | S0406: 1, S0206: 1, | L0756: 1, L0593: 1, | L0361: 1 and H0668: 1. | L0748: 10, H0305: 6, | H0150: 5, L0777: 5, | L0731: 5, L0776: 4, | L0809: 4, L0751: 4, | S0358: 3, L0157: 3, | L0774: 3, L0775: 3, |
|  |                     |      |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     | • ,                    | Arg-17 to Gln-23,    | Asn-63 to Gln-71.   |                     | •                   |                     |                     |
|  |                     |      |                     |                     |    |                     |                     | •                   |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     | _                   |                     |                        | 3110                 |                     | •                   |                     | •                   | •                   |
|  |                     |      | ,                   |                     |    |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                        | 3 - 500              |                     |                     |                     |                     |                     |
|  |                     |      |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 935                  |                     |                     |                     |                     |                     |
|  |                     |      |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1061332              | -                   |                     |                     |                     |                     |
| ·  |                     |      |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                        | HVVBA82              |                     |                     |                     | -                   |                     |

|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <br>                    |                     |                     |                     |                     |    | <br>                    |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|----|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 188826,             | 190040,             | 190040,             | 190040              |                     |                     | •                   |                     |                     |                     |                     | -                   |                     |                     | ~                   |                     | ,                       | ·                   |                     |                     |                     | •  |                         |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | ,                   | ······              |                     | _                   |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |    |                         |                     |                     |                     |                     |                     |
| L0664: 3, H0672: 3, | L0439: 3, L0754: 3, | L0750: 3, H0255: 2, | S0360: 2, T0039: 2, | F0006: 2, S0036: 2, | H0087: 2, H0264: 2, | H0625: 2, L0769: 2, | L0768: 2, L0651: 2, | L0663: 2, H0593: 2, | L0740: 2, L0755: 2, | L0758: 2, L0605: 2, | H0484: 1, H0402: 1, | S0418: 1, S0420: 1, | S0376: 1, S0045: 1, | S0046: 1, S0278: 1, | H0437: 1, H0392: 1, | <br>H0643: 1, H0331: 1, | H0270: 1, H0101: 1, | H0427: 1, H0004: 1, | S0010: 1, H0390: 1, | H0318: 1, H0327: 1, | Ţ, | <br>H0266: 1, H0213: 1, | H0553: 1, H0673: 1, | H0135: 1, H0090: 1, | H0634: 1, H0616: 1, | F0041: 1, H0647: 1, | S0344: 1, H0529: 1, |
|                     |                     |                     |                     | · ·                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |    |                         |                     |                     |                     | •                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |    |                         |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |    |                         |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     | ·                   |                     |    |                         |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |    |                         |                     |                     | •                   |                     |                     |
| ,                   |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |    |                         |                     |                     |                     |                     |                     |

| L0637: 1, L0800: 1,<br>L0641: 1, L0662: 1,<br>L0766: 1, L0804: 1,<br>L0806: 1, L0805: 1,<br>L0657: 1, L0659: 1,<br>L0540: 1, L0518: 1,<br>S0053: 1, S0374: 1,<br>L0438: 1, H0547: 1,<br>S0126: 1, H0435: 1,<br>S0380: 1, H0518: 1,<br>H0696: 1, S3014: 1,<br>L0742: 1, L0757: 1,<br>H0445: 1, L0361: 1,<br>S0192: 1, H0543: 1 and<br>H0008: 1. | H0622: 2, L0763: 2,<br>L0776: 2, L0759: 2,<br>S0358: 1, H0370: 1,<br>H0486: 1, H0013: 1,<br>H0591: 1, L0783: 1,<br>H0144: 1, S0330: 1,<br>L0439: 1 and L0756: 1.  | AR052: 108, AR053:<br>84, AR096: 60, AR039:<br>52, AR061: 15, AR055:<br>14, AR089: 11, AR060:<br>8, AR033: 7, AR104:<br>6<br>H0494: 4, H0593: 3,  |
|--|---|---|
|  | Gly-7 to Arg-14, H0622: 2, L0763: Phe-77 to Gly-83, L0776: 2, L0759: 2 Ser-98 to Leu-106, S0358: 1, H0370: 1 Asp-114 to Tyr-120, H0486: 1, H0013: Met-161 to Gly-167, H0591: 1, L0783: Ala-178 to Ser-183. H0144: 1, S0330: 1 L0439: 1 and L075 | Pro-2 to Trp-11, AR052: 10 Arg-73 to Glu-79, 84, AR096 Pro-95 to Thr-103, 52, AR061 Pro-106 to Phe-115, 14, AR089 Asn-117 to Tyr-124, 8, AR033: Thr-142 to Cys-149, 6 Thr-177 to Pro-189, H0494: 4, |
|  | 3111  | 3112  |
|  | 99 - 692  | 1 - 978   |
|  | 936   | 937   |
|  | 1061388   | 1061466   |
|  | HWLLG38   | НТРСН84   |

|  |                                      |                                      |                        |          | _                 |           |                |           |                | 0                     |                     |                 | -                | -             |          |           |          |        |        | -        |                  |        |             |          | -         |                  |           |                     | $\neg$       |
|--|--------------------------------------|--------------------------------------|------------------------|----------|-------------------|-----------|----------------|-----------|----------------|-----------------------|---------------------|-----------------|------------------|---------------|----------|-----------|----------|--------|--------|----------|------------------|--------|-------------|----------|-----------|------------------|-----------|---------------------|--------------|
|  | ٠                                    |                                      |                        |          |                   |           |                |           |                |                       |                     |                 |                  |               |          |           |          | •      |        |          |                  |        |             |          |           |                  |           |                     | •            |
|  |                                      |                                      |                        |          |                   |           |                |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  |           |                     |              |
|  |                                      |                                      |                        | _        |                   |           |                |           |                |                       |                     |                 |                  | •             |          |           | <u>.</u> |        |        |          |                  |        |             |          |           |                  |           |                     | $\dashv$     |
|  |                                      |                                      |                        |          |                   |           |                |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  | •         |                     |              |
|  |                                      |                                      |                        |          |                   |           |                |           |                |                       | •                   |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  |           |                     |              |
|  |                                      |                                      | pu                     | $\dashv$ | 6,                | Š,        | ώ.             | 3,        | 7              | 5,                    |                     |                 |                  |               |          |           |          |        |        | ·        |                  |        |             |          |           |                  |           | _                   | <br> -<br> - |
| 1,                                     | <br>                                 | 5: 1,                                | ): 1 a                 |          | 53:               | :96       | :68            | .09       | .19            | 766:                  | .;<br>.;            | 2,              | <u>-</u>         | 3: 1,         | 5: 1,    | 2: 1,     | 5: 1,    | l: 1,  | ; 1,   | ; I,     | ; <del>1</del> , | 1      | i: 1,       | 2: 1,    | 5: 1,     | 3: 1,            | . I,      | ); 1 <b>,</b>       | 686:         |
| 0045                                   | 10486                                | 10545                                | 1003                   |          | 8, AR053:         | 5, AR096: | 3, AR089:      | 3, AR060: | 3; AR061:      | 9,10                  | 0756                | 0779            | 0354             | , H0013:      | , H0545: | l, H0252: | H0316:   | H0641: | S0422: | L0369:   | L0762:           | L0804: | L0656:      | H0702:   | 1, H0555: | 0028             | I, L0750: | 02/80               | and L0686:   |
| 1, S(                                  | 1, H                                 | 1, H                                 | 1, H                   | _:       |                   |           |                |           |                | 1: 70                 | 5, L                | 2, L            | 2, 8             | $\overline{}$ | _        |           | 1,       | Ŧ,     |        |          | 1,               | 1      | Ξ,          |          | 1, F      | : 1, S           |           | 1, L                | _            |
| Ser-196 to Cys-208, S0356: 1, S0045: 1 | Gly-219 to Asp-224, H0485: 1, H0486: | Pro-278 to Gly-283. H0052: 1, H0545: | H0179: 1, H0039: 1 and | S0148:   | AR052:            | AR039:    | <b>AR033</b> : | AR104:    | <b>AR055</b> : | H0651: 709, L0766: 5, | .0754: 5, L0756: 3, | 0803: 2, L0779: | .0759: 2, S0354: | 10643:        | H0194:   | H0373:    | H0615:   | H0040: | 10647: | .0598:   | .0520:           | .0649: | .0527:      | 10144:   | H0547: 1  | H0436: 1, S0028: | .0746:    | .0777: 1, L.0780: 1 | .0752:       |
| 8,<br>S(                               | 7,<br>T,                             | 3. H                                 | ,                      | Š        | <u>∢</u>          | ⋖         | ⋖              | _≺        | <u>∢</u>       | _                     |                     | <u>ت</u>        |                  | Ξ             | 王        | 王         | 正        | 프      | 王      | <u> </u> | <u> </u>         | 그      | <u>_</u>    | <u> </u> | 工         | 王                |           | 그                   | 고            |
| ys-20                                  | .sp-2                                | ly-28                                |                        |          | s-31.             |           |                | •         |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  |           |                     |              |
| to C                                   | to A                                 | to G                                 |                        |          | Cys-17 to Lys-31. |           |                |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  |           |                     |              |
| -196                                   | /-219                                | -278                                 |                        |          | s-171             |           |                |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  |           |                     |              |
| Ser                                    | <u>র্</u> ড                          | Pro                                  |                        |          |                   |           |                |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  |           |                     |              |
|  |                                      |                                      |                        |          | 3113              |           |                |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  |           |                     |              |
|  |                                      |                                      |                        |          | 47.1              |           |                |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  |           | _                   |              |
|  |                                      |                                      |                        |          | 139 - 471         | •         |                |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  |           |                     |              |
|  |                                      |                                      |                        |          | 938               |           |                |           |                |                       |                     |                 |                  | •             |          |           |          |        |        | •        |                  |        |             |          | i-        |                  |           |                     |              |
| -                                      | _                                    |                                      |                        |          |                   |           |                |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        | <del></del> |          |           |                  |           |                     |              |
|  |                                      |                                      | ٠.                     |          | 1061521           |           |                |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  |           |                     |              |
|  | _                                    |                                      |                        |          |                   |           | ~              |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          | _         |                  |           | *************       |              |
|  |                                      |                                      |                        |          | 1168              |           |                |           |                |                       |                     |                 |                  |               |          |           |          |        | -      |          |                  |        |             |          | _         |                  |           |                     |              |
|  |                                      |                                      |                        |          | HWLHJ68           |           |                |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  |           |                     |              |
|  |                                      |                                      |                        |          | H                 |           |                |           |                |                       |                     |                 |                  |               |          |           |          |        |        |          |                  |        |             |          |           |                  |           |                     |              |

|  |  |                     |                     |                     |                     |                     | ٠                   | •                               |                     |                     |                     |                     | ,                   | ٠                   |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |
|--|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  | ,  |                     |                     |                     | •                   |                     |                     |                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | ····                |                     | _                   |                     |                     | _                   |
|  |  |                     |                     |                     |                     |                     |                     |                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| S0428: 2, H0610: 1,<br>H0179: 1, H0271: 1 and<br>S0052: 1. | S0132: 1   | L0794: 5, L0803: 3, | H0556: 2, S0360: 2, | S0422: 2, L0783: 2, | L0809: 2, L0438: 2, | <u> </u>            | L0747: 2,           | L0777: 2, L0757: 2,             | L0588: 2, L0594: 2, | H0171: 1, T0002: 1, | H0657: 1, H0638: 1, | S0132: 1, H0369: 1, | H0441: 1, H0431: 1, | H0497: 1, S0280: 1, | S0010: 1, H0318: 1, | H0263: 1, H0544: 1, | T0003: 1, H0373: 1, | H0201: 1, H0032: 1, | H0673: 1, H0068: 1, | H0038: 1, H0551: 1, | S0426: 1, L0640: 1, | L0763: 1, L0638: 1, | L0662: 1, L0768: 1, | L0804: 1, L0774: 1, |
| 3114 Pro-27 to His-34.                                     | Glu-7 to Gly-12,<br>Ala-71 to Leu-79,<br>Ser-98 to Asn-103 | Pro-18 to Asn-25,   | Arg-56 to Lys-64,   | Gly-76 to Gly-85,   | Lys-92 to Leu-98,   | Gly-116 to Gly-121, | Gln-132 to His-138, | Thr-159 to Asp-167. L0777: 2, 1 |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 3114   | 3115   | 3116                |                     |                     |                     |                     |                     |                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 2 - 193  | 3 - 338  | 208 - 741           |                     |                     |                     |                     |                     |                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 939  | 940  | 941                 |                     |                     |                     |                     |                     |                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 1061543  | 1061629  | 1061694             |                     |                     |                     |                     |                     |                                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HLGDA34  | HAICB08  | HVVAW60             |                     |                     |                     | ,                   |                     |                                 |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|   | 147680,<br>189800,                                | 600919,<br>601542                          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---|---|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   |   | <u>&amp; &amp;</u>                         |                     | •                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     | ,                   |                     |                     | •                   |                     |                     |                     | ,                   |                     |
| L0806: 1, L0805: 1,<br>L0787: 1, H0660: 1,<br>H0672: 1, S0328: 1,<br>S3014: 1, L0749: 1,<br>L0759: 1, H0445: 1,<br>L0581: 1 and H0216: 1. | L0748: 26, L0754: 20, 4q26<br>L0747: 9, L0756: 8, | L0777: 8, L0752: 8,<br>L0744: 6, L0740: 6, | L0757: 6, H0046: 5, | H0553: 5, L0766: 5, | L0803: 5, L0775: 5, | L0755: 5, L0759: 5, | S0418: 4, S0010: 4, | L0662: 4, L0794: 4, | L0774: 4, L0806: 4, | L0458: 4, L0/51: 4, | L0758: 4, S0212: 3, | S0358: 3, H0632: 3, | H0635: 3, H0156: 3, | H0052: 3, S0003: 3, | S0152: 3, H0436: 3, | S0037: 3, S0028: 3, | L0750: 3, L0615: 2, | H0556: 2, S0420: 2, | H0619: 2, H0559: 2, | H0013: 2, H0575: 2, | H0421: 2, H0251: 2, | H0545: 2, H0687: 2, |
|   | Cys-4 to Asp-16,<br>Lys-36 to Tyr-41,             | Pro-48 to Asp-68.                          |                     |                     |                     |                     | <u> </u>            |                     |                     |                     |                     | <u> </u>            |                     |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |
|   | 3117  |  |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •••                 |                     |                     |                     |                     |                     |                     |                     |
|   | 3 - 206   |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 942   |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 1061708   |  |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | HPDVB50   |  |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |

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|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------|---------------------|----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <u> </u>            |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                | - <del></del>       |                     |                     |                     | <del></del>         |                     | <del></del>     |                     |                |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0628: 2, H0538: 2, | .0763: 2, L.0770: 2, | .0764: 2, L0626: 2, | .0804: 2, L0375: 2, | .0809: 2, S0126: 2, | H0658: 2, H0660: 2, | H0521: 2, S0390: 2, | S0027: 2, L0745: 2, | .0588: 2, L0591: 2, | .0603: 2, S0192: 2, | S0196: 2, H0170: 1, | : 1, S0114: 1, | S0134: 1, L0002: 1, | H0657: 1, H0341: 1, | H0663: 1, H0638: 1, | S0354: 1, S0360: 1, | S0045: 1, S0046: 1, | S0132: 1, H0351: 1, | i: 1, S0222: 1, | H0592: 1, H0497: 1, | : 1, H0642: 1, | H0486: 1, H0244: 1, | H0036: 1, H0004: 1, | F0048: 1, H0581: 1, | S0049: 1, H0263: 1, | H0546: 1, L0471: 1, | H0620: 1, H0197: 1, | H0199: 1, H0246: 1, | H0373: 1, H0083: 1, | H0356: 1, S0025: 1, |
| H0628               | 170763               | L0764               | L0804               | [70803]             | H0658               | H0521               | 20027               | 10588               | [10603              | 80196               | 80040          | S0134               | H0657               | H0663               | 80354               | 80045               | S0132               | H0550           | H0592               | H0333          | H0486               | H0036               | T0048               | 80049               | H0546               | H0620               | H0199               | H0373               | H0356               |
|                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·              |                     | <u> </u>            | <del>.</del>        |                     |                     |                     |                 |                     | <del>.</del>   |                     |                     |                     |                     |                     | •                   | · · ·               |                     | <del></del>         |
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| 6: 1,            | 8: 1,            | 0: 1,            | 2: 1,            | 0: 1,            | 0: 1,            | 2: 1,            | 0: 1,            | 9: 1,            | 1:1,             | ): 1 <b>,</b>    | 3: 1,            | 7:1,   | 0: 1,            | 5: 1,            | I: 1,          | 3: 1,              | 5: 1,            | 3: 1,            | 8: 1,            | 8: 1,            | 8: 1,            | 5: 1,            | 2: 1,            | 9: 1,            | 9: 1,            | 9: 1,            | 9: 1,            | 5: 1,              | 7: 1,           |
| H0510: 1, H0266: | S0250: 1, H0328: | H0622: 1, H0030: | H0644: 1, H0032: | H0211: 1, H0090: | H0372: 1, H0040: | F0067: 1, H0412: | H0413: 1, H0100: | F0041: 1, H0509: | S0150: 1, H0641: | S0422: 1, L0769: | .0646: 1, L0773: | .0521: 1, L0767:                             | .0768: 1, L0650: | .0376: 1, L0776: | .0655: 1, LQ66 | JO512: 1, L0783: 1 | .0791: 1, L0666: | H0520: 1, H0593: | H0414: 1, H0648: | H0672: 1, S0328: | H0539: 1, S0378: | S0146: 1, H0555: | H0626: 1, S3012: | S0206: 1, L0439: | .0751: 1, L0749: | .0786: 1, L0779: | H0445: 1, L0599: | .0608: 1, S0026: 1 | H0665: 1, H0667 |
| 0HI              | SOS              | HO<br>HO         | 0H               | <u>0H</u>        | OH<br>HO         | OL               | OH)              | <u>or</u>        | SO               | <u> </u>         | <u> </u>         | <u>2</u>                                     | <u>2</u>         | 2                | <u>3</u>       | <u>9</u>           |                  | HO               | HO<br>HO         | OH<br>HO         | OH<br>H          | SO               | OH<br>H          | . SO             | <u>3</u>         | 2                | OH<br>HO         | <u>3</u> .         | HO              |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |                  |                  |                |                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |                 |
|                  |                  | •                |                  | -                |                  |                  |                  |                  |                  |                  |                  | <u>,                                    </u> |                  |                  |                |                    |                  |                  |                  |                  |                  |                  |                  |                  | <u></u>          |                  |                  |                    |                 |
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| H0543: 1, H0423: 1, | S0424: 1, S0452: 1, | S0460: 1 and S0384: 1. | L0439: 10, H0013: 7, | L0438: 4, L0758: 4, | L0599: 3, H0171: 2, | Ξ                   | T0010: 2, S0250: 2, | H0553: 2, H0644: 2, | _                   |                     | L0779: 2, L0777: 2, | ᆜ                   | <u></u>             | H0461: 1, L0623: 1, | H0244: 1, H0427: 1, | S0280: 1, H0575: 1, | H0036: 1, S0346: 1, | H0327: 1, H0024: 1, | H0051: 1, S0051: 1, | H0039: 1, T0006: 1, | H0383: 1, H0316: 1, | S0036: 1, H0038: 1, | H0268: 1, L0351: 1, | H0280: 1, H0494: 1, |   | L0646: 1, L0768: 1, | L0649: 1, L0650: 1, | L0805: 1, L0776: 1, | L0659: 1, L0783: 1, |
|                     |                     |                        | Ser-24 to Lys-55,    | Glu-67 to Ala-72,   | Leu-74 to Pro-88,   | Lys-104 to Tyr-119, | lle-121 to Pro-132, | Ser-138 to Glu-148, | Asp-158 to Pro-167, | Glu-177 to Asp-203, | Ser-208 to Gln-218, | Pro-221 to Pro-227, | Gln-229 to Pro-236, | Ser-246 to Asn-254, | Pro-268 to Thr-279, | Arg-281 to Thr-288, | Pro-295 to Asp-301, | Val-305 to Val-315, | Ala-318 to Asn-344, | Glu-351 to Pro-366, | Ala-415 to Gly-424, | Val-470 to Ser-475, | Leu-480 to Gly-485, | Pro-511 to Cys-522. | • |                     |                     |                     |                     |
| ļ                   |                     |                        | 3118                 |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |
|                     |                     |                        | 3 - 1631             |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     | •                   |                     |                     |                     | _                   |                     |                     |                     |   |                     |                     | •                   |                     |
|                     |                     |                        | 943                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |
|                     |                     |                        | 1061765              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     | •                   |                     |                     |
|                     |                     |                        | HAZAY40              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                     |

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| H0144: 1, H0690: 1,<br>H0659: 1, H0660: 1, | H0648: 1, S0330: 1, | H0539: 1, S0037: 1, | L0731: 1, L0608: 1, | L0595: 1 and L0366: 1. | L0777: 21, L0439: 18, | H0052: 15, S0010: 12, | H0013: 11, L0770: 11, | L0749: 11, H0144: 10, | L0748: 10, L0754: 10, | Arg-229 to Met-234, L0747: 10, H0521: 9, | S0222: 8, S0051: 8, | S0036: 8, L0659: 8, | L0740: 8, L0752: 8, | L0758: 8, L0595: 8, | S0278: 7, S0440: 7, | L0744: 7, L0592: 7,                  | H0457: 6, H0623: 6,                     | L0646: 6, H0547: 6, | S0152: 6, L0601: 6, | H0575: 5, S0049: 5, | H0046: 5, L0471: 5, | H0551: 5, L0664: 5, | L0665: 5, H0520: 5, | S3014: 5, S0260: 5, | L0599: 5, H0556: 4, | S6024: 4, S0418: 4, | S0354: 4, S0360: 4, | S0388: 4, H0615: 4, |
|  |                     |                     | ٠,                  |                        | Ala-38 to Thr-45,     | Ser-70 to Asp-77,     | Ser-85 to Asp-90,     | Asp-139 to Gly-145,   | Ile-207 to Asp-213,   | Arg-229 to Met-234,                      | Gly-259 to Ser-264, | lle-281 to Ser-288, | Asp-337 to Leu-343, | Gln-369 to Ile-376, |                     | Gin-448 to Val-456, L0744: 7, L0592: | Gln-461 to Thr-474. H0457: 6, H0623: 6, |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                     |                     |                     |                        | 3119                  |                       |                       |                       |                       | ·-··                                     |                     |                     |                     |                     |                     |                                      |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                     |                     |                     |                        | 61 - 1617             |                       |                       |                       |                       |  |                     |                     |                     |                     |                     |                                      |   |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |
|  |                     |                     |                     |                        | 944                   |                       |                       |                       |                       |  |                     |                     |                     |                     |                     |                                      |   |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |
|  |                     |                     |                     |                        | 1061766               |                       |                       |                       |                       |  |                     |                     |                     |                     |                     |                                      |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  |                     |                     |                     |                        | HACMZ51               |                       |                       |                       |                       |  |                     |                     |                     |                     |                     |                                      |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| <u>,</u>           | ۰.                  | عد                   |                     | ټ.                   | <b>∸</b> `          | 3,                  | ^                   | ~ <b>`</b>          | ~ <b>.</b>          | 3,                  | ~°.                 | <u>.</u><br>د       | ~,                  | 3,                  | ~,        | ~·,         | ^               | ~ <b>`</b> | ·~^                | ຕົ                 | ر.<br>د             | ~ໂ                  | ર્વ                 | ~                   | -5                  | ٠,                  | <b>~</b> î          | ર્સ                 | ~ໂ        |
| S0038: 4, H0100: 4 | S0344: 4, S0002: 4, | .0764: 4, L.0774: 4, | 30027: 4, L0745: 4, | .0759: 4, L.0596: 4, | S0196: 4, H0543: 4, | H0717: 3, H0638: 3, | S0420: 3, S0442: 3, | S0358: 3, H0619: 3, | S6026: 3, H0586: 3, | H0486: 3, H0156: 3, | H0599: 3, S0346: 3, | J0157: 3, H0428: 3, | H0622: 3, T0006: 3, | 10031: 3, H0038: 3, | L0771: 3, | L0789: 3    | 28: 3           | L0753: 3,  | 0731: 3, L0757: 3, | 0366: 3, H0542: 3, | ,0600: 3, H0624: 2, | 40171: 2, S0116: 2, | 10483: 2, H0305: 2, | ,0005: 2, S0376: 2, | S0408: 2, S0007: 2, | S0046: 2, S0132: 2, | S0300: 2, H0351: 2, | H0261: 2, H0370: 2, | S0280: 2, |
| H01                | <u>8</u> 00         | 1507                 | 107                 | , L05                | H05                 | , HO                | <b>S</b> 08         | H06                 | H05                 | , HO                | , S03               | , H02               | , TO                | , HO                | ,<br>E    | ,107        | , S00           | ,13        | ,<br>LOJ           | , H05              | , H06               | , S01               | , H0                | , S03               | , soo               | , S01               | , H03               | , H0                | , S02     |
| 38: 4,             | 4.4                 | 4.4                  | 27: 4,              | 59: 4                | <b>36: 4</b> ,      | 17:3                | 20: 3,              | 58: 3               | 26:3                | 86: 3               | 99:3                | 57:3                | 22:3                | 31:3                | H0529: 3, | .0766: 3, 1 | 0438: 3, S0028: | 0750: 3, ] | 31:3               | 56:3               | 30:3                | 71:2                | 83:2                | 05:2                | 38: 2               | 46: 2               | 20:2                | 61:2                | H0438: 2, |
| <u>200</u>         | S03                 | <u>1</u> 201         | <u>2007</u>         | 1207                 | S019                | H07                 | <b>S04</b> 2        | <b>S03</b>          | <u>S60.</u>         | H04                 | H05                 | 101                 | 90H                 | H00                 | HOS       | <u> </u>    | <u>7</u>        | 107        | 103                | <u>1</u> 03        | <u>108</u>          | H01                 | <b>H</b> 0H         | <u>8</u>            | <u>S</u>            | <u>200</u>          | <u>S03</u>          | H02                 | H04       |
|                    |                     |                      |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |           |             |                 |            |                    |                    |                     |                     |                     |                     |                     |                     |                     |                     |           |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |             |                     |             |           |                     |                     |                     |                     |                     |                     |                     |             | -                |                  |                  |                  |                  |                                       |                  |                  |
| 30474: 2,           | H0596: 2,           | H0009: 2,           | H0051: 2,           | 36028: 2,           | H0286: 2,           | H0090: 2,           | H0494: 2,           | H0130: 2,           | 0426: 2,            | L0638: 2,   | .0662: 2,           | L0657: 2,   | .0809: 2, | 0052: 2,            | 50328: 2,           | H0696: 2,           | 30404: 2,           | 10631: 2,           | .0751: 2,           | 10445: 2,           | .0361: 2,   | .0411: 1,        | H0265: 1,        | H0685: 1,        | H0294: 1,        | H0341: 1,        | 0282: 1,                              | H0663: 1,        | 30356: 1,        |
| H0318: 2, S0474: 2, | H0434: 2, H0596: 2, | H0546: 2, H0009: 2, | H0620: 2, H0051: 2, | H0083: 2, S6028: 2, | H0266: 2, H0286: 2, | H0628: 2, H0090: 2, | H0412: 2, H0494: 2, | H0509: 2, H0130: 2, | S0142: 2, S0426: 2, | .0769: 2, I | L0773: 2, L0662: 2, | L0768: 2, I |           | L0663: 2, S0052: 2, | H0519: 2, S0328: 2, | H0539: 2, H0696: 2, | H0214: 2, S0404: 2, | S0406: 2, H0631: 2, | S0037: 2, L0751: 2, | L0779: 2, H0445: 2, | L0588: 2, I | S0194: 2, L0411: | H0170: 1, H0265: | H0686: 1, H0685: | H0713: 1, H0294: | H0650: 1, H0341: | S0212: 1, S0282:                      | H0255: 1, H0663: | H0402: 1, S0356: |
|                     |                     | <u></u>             |                     |                     |                     |                     |                     | <u> </u>            |                     |             |                     | .—          |           |                     |                     |                     |                     |                     | <u> </u>            |                     | ,           |                  |                  |                  |                  |                  | <u> </u>                              |                  |                  |
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| ļ                                    |                  |           |                  |           |                  |          |           |          |                  |       |           |           |                  |           |          |          |                  |          |           |                  |                  |                  |           |                  |                  |                  |                  |
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| <u></u>                              | <del>_</del>     | í –í      | 1,               | 1,        | 1,               | 7        | ₩,        | 1,       | 1,               | 1,    | 1,        |           | 1,               | T,        | 1,       | I,       | 1,               | 1,       | 1,        | 1,               | 1,               | 1,               | 1,        | 1,               | 1,               | 1,               | <del>-</del>     |
| l, H0637:<br>1, H0645:               | 7437.            | 1, H0574: | 414:             | H0250:    | 3635:            | , H0097: | l, H0390: | , H0421: | 3597:            | 3327: | 1, H0178: | I, H0569: | 3050:            | 1, H0373: | , T0010: | H0271:   | 214:             | H0039:   | l, H0553: | 3598:            | 3634:            | 3056:            | l, T0041: | 560:             | 464:             | 150:             | 3646:            |
| 1, HC<br>1, H(                       | 1, H(            | i, H.     | 1, SC            | 1, HC     | 1, H(            | _        |           | 1, H(    | 1, H(            | 1, H( | 1, H(     | 1, H(     | 1, H(            |           |          |          | 1, S0            |          | 1, H(     | 1, H(            | 1, H(            | 1, H(            | 1, TC     | 1, H(            | 1, SC            | 1, S0            | 1. H(            |
| S0444: 1, H0637:<br>H0580: 1, H0645: | H0393: 1, H0437: | H0331: 1  | 10632: 1, S0414: | .0622: ]  | H0069: 1, H0635: | 10427:   | T0082: 1  | H0581: 1 | H0310: 1, H0597: | 3231: | 10544: ]  | .0158: 1  | H0123: 1, H0050: | H0024: 1  | H0201:   | H0179: 1 | H0288: 1, S0214: | H0688: 1 | .0483: 1  | H0165: 1, H0598: | H0591: 1, H0634: | 10264: 1, H0056: | .0351: 1  | F0042: 1, H0560: | H0625: 1, S0464: | S0438: 1, S0150: | H0633: 1, H0646: |
| SH                                   | ĬÌ               | H         | Ħ                | <u> 그</u> | Ξ                | Ħ        | ĭ         | Ħ        | Ħ                | Ħ     | Ħ         | <u> </u>  | Ħ                | Ĭ         | 耳        | Ξ        | Ĭ                | Ĭ        | <u> </u>  | Ĭ                | Ĭ                | Ĭ                | <u> </u>  | Ĕ                | Ĭ                | <u>8</u>         | Ĭ                |
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|                                      |                  |           | · · · · · ·      |           | <u></u>          |          |           |          |                  |       |           |           |                  |           |          |          |                  |          |           |                  |                  |                  |           |                  |                  |                  |                  |
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| 10538:           | 1, L0369:       | 1.0371:     | L0761:     | 20373:     | 1, 1.0649:  | .0386:      | , 1.0775:   | .0806:      | .0776:      | .0518:      | L0382:      | 10532:      | H0691: | , S0126:    | l, H0690:   | H0658:           | , H0660:    | S0380:      | S0454:    | H0704: | H0478:      | H0727:           | S0206:      | L0741:      | .0756:      | .0755:           | S0436:      | .0485:           | L0594:      |
| S0144: 1, H0538: | S0210: 1, I     | 0763: 1, I  | 0796: 1, I | 0667: 1, I | .0765: 1, I | .5569: 1, I | .0803: 1, I | .0378: 1, I | .0805: 1, I | .0655: 1, I | .0383: 1, I | .0792: 1, I | I,     | roo68: 1, 5 | H0689: 1, ] | H0435: 1, H0658: | H0670: 1, ] | S0330: 1, S | H0710: 1, | 7      | H0555: 1, ] | H0627: 1, H0727: | 33012: 1, 5 | S0032: 1, I | .0746: 1, 1 | .0780: 1, L0755: | S0031: 1, S | .0589: 1, L0485: | .0608: 1, 1 |
| 801              | S02             | <u>101</u>  | 107        | 106        | 107         | L55         | 108         | 103         | <u> </u>    | 106         | <u> 103</u> | 107         | H07    | T00         | H06         | H04              | H06         | S03         | H07       | H05    | H05         | H06              | 230         | 200         | 101         | 100              | 800         | 1.05             | 106         |
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| S0011: 1, S0026: 1, | S0192: 1, H0423: 1 and | H0352: 1. | L0794: 6, L0766: 6, | L0758; 6, L0665; 4, | L0439: 4, L0779: 4, | H0590: 3, L0598: 3, | L0763: 3, L0666: 3, | H0648: 3, L0754: 3, | L0362: 3, H0506: 3, | H0657: 2, H0661: 2, | S0438: 2, L0646: 2, | L0803: 2, L0375: 2, | L0806: 2, L0809: 2, | L0438: 2, L0744: 2, | L0740: 2, L0747: 2, | L0731: 2, S0434: 2, | L0589: 2, H0713: 1, | S0114: 1, H0583: 1, | H0255: 1, H0669: 1, | H0663: 1, SO222: 1, | H0497: 1, L0021: 1, | L0022: 1, H0036: 1, | H0052: 1, L0163: 1, | H0239: 1, H0179: 1, | H0615: 1, H0553: 1, | H0163: 1, H0038: 1, | H0100: 1, S0440: 1, | S0422: 1, S0426: 1, | UNKWN: 1, L5575: 1, |
|                     |                        |           | Thr-6 to Leu-24,    | Gly-87 to Ala-92,   | Ser-103 to Ser-118, | Asp-127 to Asn-     | 135,                | 141 to Phe-147,     |                     | Phe-330 to Ala-338, | Pro-390 to Thr-398. |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                        |           | 3120                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |
|                     |                        |           | 2 - 1300            | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|  | 70,<br>91,<br>91,   |
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|  | 107970,<br>115650,<br>182600,<br>602091   |
|  | 14q24   |
| L0644: 1, L0764: 1,<br>L0662: 1, L0651: 1,<br>L0653: 1, L0657: 1,<br>L0661: 1, L0657: 1,<br>L0793: 1, L0664: 1,<br>S0374: 1, H0642: 1,<br>H0658: 1, S0328: 1,<br>H06539: 1, S0454: 1,<br>S0406: 1, S0268: 1,<br>L0759: 1, L0752: 1,<br>L0759: 1, L0752: 1, | S0126: 9, H0622: 6,<br>L0777: 5, S0250: 4,<br>H0551: 4, S0045: 3,<br>L0659: 3, L0809: 3,<br>L0565: 3, L0757: 3,<br>S0196: 3, S0212: 2,<br>S0046: 2, H0619: 2,<br>H0575: 2, L0805: 2,<br>L0665: 2, L0743: 2,<br>T0049: 1, S0420: 1,<br>S0356: 1, S0360: 1,<br>H0437: 1, H0586: 1,<br>H0437: 1, H0013: 1,<br>H0486: 1, H0013: 1,<br>H0042: 1, H0618: 1, |
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| H0421: 1, H0309: 1,<br>H0545: 1, H0620: 1, | H0024: 1, H0028: 1, | S0003: 1, H0628: 1,<br>H0000: 1 H0040: 1 | H0269: 1, H0412: 1, | H0413: 1, S0210: 1, | L0763: 1, L0794: 1, | L0804: 1, L0776: 1, | L0657: 1, H0690: 1, | H0658: 1, H0670: 1, | H0660: 1, H0648: 1, | S0378: 1, H0696: 1, | S0406: 1, S0118: 1, | S0037: 1, S0027: 1, | S0028: 1, L0744: 1, | L0779: 1, L0758: 1 and | S0011: 1. | L0439: 48, H0013: 25, | H0521: 21, S0152: 17, | H0090: 13, S0010: 9, | Leu-103 to Asn-109, S0126: 9, H0543: 9, | H0553: 8, H0591: 8, | H0144: 8, S0192: 8,                     | H0556: 7, H0038: 7,                    | H0551: 7, H0494: 7,                    | S0240: 7, L0740: 7, | L0758: 7, S0256: 6, | S0132: 6, S0474: 6, | L0666: 6, L0596: 6, |
|  |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Gly-13 to Arg-19,     | Glu-28 to Glu-64,     | Glu-81 to Asp-88,    | Leu-103 to Asn-109,                     | lle-132 to Gln-144, | Glu-148 to Leu-157, H0144: 8, S0192: 8, | Met-188 to Tyr-193, H0556: 7, H0038: 7 | Ser-223 to Thr-230. H0551: 7, H0494: 7 |                     |                     |                     |                     |
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| L0595: 6, H0667: 6, | S0414: 5, H0575: 5, | H0581: 5, L0483: 5, | H0641: 5, L0764: 5, | L0438: 5, H0519: 5, | L0751: 5, L0747: 5, | L0731: 5, L0757: 5, | H0661: 4, H0662: 4, | S0354: 4, S0376: 4, | S0046: 4, S0222: 4, | H0052: 4, H0266: 4, | S0214: 4, H0031: 4, | H0040: 4, L0662: 4, | H0520: 4, H0539: 4, | H0522: 4, S0206: 4, | L0748: 4, L0754: 4, | H0542: 4, S0134: 3, | H0657: 3, S0358: 3, | H0580: 3, H0586: 3, | H0009: 3, H0050: 3, | L0471: 3, H0201: 3, | H0039: 3, H0644: 3, | H0032: 3, H0598: 3, | H0616: 3, S0142: 3, | S0344: 3, L0773: 3, | L0794: 3, L0649: 3, | L0659: 3, L0663: 3, | H0435: 3, H0658: 3, | H0660: 3, S0330: 3, | S0270: 3, L0752: 3, |
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| 3,                 | ω,                  | 4                   | 4                   | ر.<br>د             | ર્ય                 | 4                | 4                   | 4                   | ą                   | 4                   | 4                   | લ                   | 4                   | 4                   | 4        | 4                   | ર્ય         | 4                   | 2,                  | બ                   | બં                  | T,               | Ξ,                 | Ĺ,                 |                     | T,                 | <u>_</u>           | 1                  | 1,               |
| L0591: 3, L0592: 3 | .0593: 3, H0423: 3, | H0624: 2, S0218: 2, | H0341: 2, H0663: 2, | S0356: 2, S0278: 2, | H0587: 2, H0497: 2, | H0574: 2, H0485: | H0486: 2, T0115: 2, | H0046: 2, H0014: 2, | S6028: 2, S0003: 2, | H0615: 2, H0622: 2, | F0023: 2, H0316: 2, | S0036: 2, H0135: 2, | H0264: 2, H0623: 2, | S0150: 2, H0529: 2, | 90       | .0783: 2, L0809: 2, | L0602: 2,   | H0518: 2, L0750: 2, | H0445: 2, L0599: 2, | .0608: 2, L0594: 2, | .0366: 2, S0011: 2, | 170:             | S0258: 1, T0002: 1 | S0040: 1, H0583: 1 | H0656: 1, S0116: 1, | S0212: 1, S0035: 1 | S0400: 1, H0346: 1 | H0669: 1, H0671: 1 | 30               |
| 507                | HQH<br>100          | <b>S02</b>          | HO                  | 302                 | H0                  | H0               | T01                 | HOOH                | Š                   | HOC                 | H03                 | HOH                 | HOH                 | H05                 | 89       | 89                  | 28          | 107                 | 3                   | 2                   | 88                  | H0506: 2, H0170: | 100                | H05                | <b>S</b> 01         | S00                | H03                | H                  | S0418: 1, S0420: |
| 3,                 | ເກີ                 | 2,                  | .;<br>2             | 4                   | 3                   | .2               | .,                  | 4                   | 4                   | 4                   | ď                   | 4                   | 2,                  | 4                   | 4        | 4                   | 4           | 3,                  | .,                  | 4                   | ą                   | 3                | Τ,                 | <u> </u>           | ·                   | Ή,                 | <del>-</del>       | ÷.                 | 1,               |
| 591                | 593                 | 624                 | 341                 | 356:                | 587                 | 574              | 486                 | 8                   | 328                 | 615                 | 023                 | 336                 | 264                 | 150                 | 775      | 783                 | .0665: 2, 1 | 518                 | 45                  | 809                 | 366                 | 506              | 258                | 8                  | 656                 | 212                | 8                  | 69                 | 418              |
| LO                 | <u> </u>            | <u>H</u>            | 요                   | <u>S</u> 0          | 요                   | 丑                | 丑                   | 丑                   | <u>S</u> 6          | 丑                   | 产                   | <u>80</u>           | 呈                   | 80                  | <u>2</u> | <u>2</u>            | <u> </u>    | 呈                   | <u>H</u>            | <u> </u>            | 9                   | 丑                | <u>S</u>           | <u>S</u>           | 出                   | <u>S</u>           | Š                  | <u>H</u>           | 8                |
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| S0360: 1, H0675: 1, S0045: 1, H0393: 1, H0437: 1, S6014: 1, H0437: 1, H0403: 1, H0427: 1, H0156: 1, H0042: 1, H0590: 1, H0004: 1, H0318: 1, S0040: 1, T0110: 1 | H0544: 1, H0457: 1,<br>N0006: 1, H0562: 1,<br>H0024: 1, H0373: 1,<br>L0163: 1, S0388: 1,<br>T0010: 1, H0083: 1,<br>H0630: 1, H0179: 1, | H0188: 1, H0288: 1, S0250: 1, H0252: 1, F0006: 1, H0628: 1, L0455: 1, L0456: 1, H0634: 1, H0268: 1, H0634: 1, H0268: 1, H0634: 1, H0268: 1, H0634: 1, H0268: 1, H0634: 1, H0268: 1, H0634: 1, H0268: 1, H0634: 1, H0268: 1, H0634: 1, H0268: 1, H0634: 1, H0268: 1, H0634: 1, H0268: 1, H0634: 1, H0268: 1, H0634: 1, H0268: 1, H0634: | H0413: 1, 10004:<br>H0100: 1, L0351:<br>L0435: 1, L0370: 1<br>T0041: 1, H0560:<br>H0561: 1, S0382: S0450: 1, H0509: | H0647: 1, H0633: 1<br>H0647: 1, S0144: 1,<br>S0208: 1, S0422: 1, |
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| L0761: 1, L0667: 1,<br>L0772: 1, L0372: 1,<br>L0646: 1, L0521: 1,<br>L0768: 1, L0774: 1,<br>L0375: 1, L0651: 1,<br>L0805: 1, L0776: 1,<br>L0655: 1, L0657: 1, |   | H06/2: 1, H0651: 1,<br>S0328: 1, S0378: 1,<br>S0380: 1, H0134: 1,<br>H0555: 1, H0436: 1,<br>H0478: 1, H0627: 1,<br>S0037: 1, S3014: 1,<br>S0027: 1, S0028: 1,<br>L0759: 1, L0684: 1,<br>H0668: 1, H0665: 1, | L0717: 3, H0618: 2,<br>H0617: 2, L5566: 2,<br>L0649: 2, L0666: 2,<br>H0685: 1, H0716: 1,<br>H0306: 1, S0360: 1,<br>S0045: 1, S0222: 1,<br>H0370: 1, H0392: 1, |
|   |   |   | Gly-20 to Gly-25,<br>Leu-47 to Pro-56,<br>Gly-63 to Glu-68,<br>Glu-87 to Ala-99.  |
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| 0622: 1,         | , L0763: 1, | , L5565: 1, | L0641: 1,                                     | 1.0364: 1, | 3663: 1,        | , H0690: 1, | 3779: 1,            | d L0595             | L0803:              | 0438: 6,            | 0010: 5,           | L0591: 5,   | 0144: 4,           | 3751: 4,            | 3007: 3,            | 0494: 3,           | 3, 3,               | 0686: 2,            | )408: 2,            | 0619: 2,            | 6028: 2,            | 0598: 2,            | 3800: 2,            | 0659: 2,            | 3663: 2,            | 0547: 2,            | 0152: 2,            | 0754: 2,            | L0750: 2,    |
| H0427: 1, H0622: | 0640: 1, L  | ·           | 0373: 1, LO                                   | 2648: 1, L | 0766: 1, L0663: | 0665: 1, H  | .0748: 1, L.0779: 1 | ,0599: 1 and L0595: | L0794: 13, L0803: 9 | H0013: 7, L0438: 6, | .0758: 6, T0010: 5 | .0439: 5, L | 10413: 4, H0144: 4 | .0742: 4, L0751: 4, | ,0731: 4, S0007: 3, | H0038: 3, H0494: 3 | .0755: 3, L0601: 3, | H0170: 2, H0686: 2, | S0418: 2, S0408: 2, | S0046: 2, H0619: 2, | H0050: 2, S6028: 2, | H0268: 2, L0598: 2, | .0770: 2, L0800: 2, | .0764: 2, L0659: 2, | .0666: 2, L0663: 2, | .0665: 2, H0547: 2, | H0658: 2, S0152: 2, | .0741: 2, L0754: 2, | .0747: 2, LJ |
| <u>E</u>         | ᆜ           | <u> </u>    | <u>, , , , , , , , , , , , , , , , , , , </u> | اعر        | ير              | <u>, 1</u>  | <u> </u>            | 브                   |                     | <u>,</u> ==         | ᆸ                  | <u> </u>    | <u> </u>           | <u>.</u>            | بر                  | <u> </u>           | <u> </u>            | <u> </u>            | S                   | S                   | <u>=</u>            | <u>II</u>           | ᆜ                   | H                   |                     | ᆜ                   | <u> </u>            | ᆸ                   | Τ            |
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| L0779: 2, L0752: 2, | L0759: 2, L0588: 2, | L0592: 2, L0411: 1, | H0624: 1, S0001: 1, | S0420: 1, H0329: 1, | S0045: 1, S0132: 1, | S6026: 1, H0437: 1, | H0592: 1, L0021: 1, | H0575: 1, S0010: 1, | H0318: 1, H0251: 1, | T0115: 1, H0046: 1, | H0569: 1, H0014: 1, | H0373: 1, H0266: 1, | S0250: 1, H0328: 1, | H0622: 1, H0032: 1, | H0616: 1, H0412: 1, | H0056: 1, H0623: 1, | S0386: 1, H0100: 1, | L0351: 1, L0564: 1, | H0509: 1, L4747: 1, | L0644: 1, L0804: 1, | L0775: 1, L0375: 1, | L0776: 1, L0809: 1, | L0790: 1, L0532: 1, | H0520: 1, H0670: 1, | S0146: 1, H0555: 1, | S0028: 1, L0748: 1, | L0740: 1, L0777: 1, | L0753: 1, L0757: 1, | H0445: 1, L0605: 1, |
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| S0242: 1 and S0276: 1. | H0038: 4, L0758: 2,<br>S0040: 1, H0125: 1, | Asn-100 to Arg-106,80420: 1, H0622: 1, His 140 to Cly, 153, H0634: 1, H0616: 1 | Ser-167 to Gly-193, H0623: 1, T0042: 1, and | H0560: 1.           | -                   |                     | AR039: 25, AR089: | 23, AR096: 18, AR053: | 16, AR060: 15, AR033: | 14, AR055: 10, AR104: | 9, AR061: 7         | L0766: 3, S0356: 2, | S0222: 2, H0266: 2, | H0616: 2, S0422: 2,                     | L0794: 2, L0655: 2, | L0664: 2, H0672: 2, | L0777: 2, L0731: 2, | H0422: 2, H0171: 1, | H0657: 1, S0116: 1, | H0341: 1, H0483: 1, | H0449: 1, S0376: 1, | S0045: 1, H0587: 1, | H0497: 1, H0421: 1, | H0327: 1, H0057: 1, | H0014: 1, H0375: 1, | S6028: 1, S0003: 1, | S0214: 1, H0328: 1, |
|                        | Ala-18 to His-32,<br>Tyr-51 to Phe-56,     | Asn-100 to Arg-106, S0420: 1, H0622: His 140 to Gly, 153, H0634: 1, H0616:     | Ser-167 to Gly-193.                         | Ser-205 to Asp-214, | Trp-237 to Thr-244, | Asp-268 to Gln-274. | Pro-18 to Thr-25, | Ser-36 to Tyr-45,     | Met-68 to Tyr-77,     | Gly-148 to Ser-154,   | Ser-234 to Gly-242, | Asn-267 to Asp-     | 274,                | Cys-337 to Gly-342, H0616: 2, S0422: 2, | Met-388 to Thr-394. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        | 3125                                       |  |   |                     |                     |                     | 3126              |                       |                       |                       |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        | 380 - 1234                                 |  |   |                     | -                   |                     | 2 - 1183          | •                     |                       |                       |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|                        | 950  |  |   |                     |                     | ,                   | 951               |                       |                       |                       |                     |                     |                     |   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |
|                        | 1062084                                    |  |   |                     | '                   |                     | 1062123           |                       |                       |                       |                     |                     |                     |   |                     |                     |                     |                     | _ <del>-</del>      |                     |                     |                     |                     |                     |                     |                     |                     |
|                        | нтеғм89                                    |  |   | -                   |                     |                     | HCHAK72           |                       |                       |                       |                     |                     |                     |   |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |

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| H0644: 1, H0032: 1,<br>H0090: 1, H0038: 1,<br>H0087: 1, H0264: 1,<br>H0268: 1, H0529: 1,<br>L0762: 1, L0638: 1,<br>L0871: 1, L0521: 1,<br>L0859: 1, L0657: 1,<br>L0666: 1, L0665: 1,<br>H0658: 1, H0521: 1,<br>S0176: 1, S0406: 1,<br>L0439: 1, L0779: 1 and | H0422: 4, S0222: 3,<br>L0775: 3, L0754: 3,<br>H0171: 2, H0013: 2,<br>H0635: 2, H0624: 2,<br>L0438: 2, H0528: 2,<br>L0740: 2, L0756: 2,<br>L0755: 2, L0731: 2,<br>L0757: 2, S0260: 2,<br>H0170: 1, S0402: 1,<br>S0376: 1, H0580: 1,<br>H0574: 1, H0486: 1,<br>L0021: 1, H0648: 1,<br>H0036: 1, H0644: 1,<br>H0031: 1, H0644: 1,<br>H0031: 1, H0644: 1,  |
|  | Pro-16 to Arg-24, H0422: 4, S0222: 3<br>Pro-31 to Thr-41, L0775: 3, L0754: 3, Leu-50 to Gly-63, H0171: 2, H0013: 2, Leu-132 to Asp-138, H0635: 2, H0024: 2, Gln-178 to Lys-188, L0438: 2, L0518: 2, Gln-178 to Lys-188, L0438: 2, L0758: 2, L076: 2, L075: 2, L075: 2, L073: 2, Lo207 to Lys-213, L0755: 2, L0731: 2, Gly-221 to Ala-228, L0757: 2, S0260: 2, Gly-239 to Phe-245, H0170: 1, S0402: 1, Asp-257 to Ser-264, S0376: 1, H0580: 1, Ala-301 to Tyr-334, L0021: 1, H0698: 1, Lys-371 to Lys-384, H0036: 1, H06545: 1, Ile-447 to Phe-454, H0031: 1, H0644: 1, Ile-447 to Phe-454, H0031: 1, H0644: 1, Val-475 to Thr-483, H0032: 1, H0598: 1, |
|  | 3127   |
|  | 2 - 1654   |
|  | 952  |
|  | 1062139  |
|  | HPAME12  |

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|                              |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                       |  |                     |                     |                     | <u>.,,</u>          |                     |                     |                     |                     |                     |                     |                     |                     |
| S0036: 1, H0163: 1,          | H0591: 1, H0494: 1,                  | H0641: 1, L0762: 1, | L0646: 1, L0662: 1, | L0794: 1, L0804: 1, | L0783: 1, L0809: 1; | L0666: 1, H0144: 1, | S0374: 1, H0547: 1, | H0689: 1, H0682: 1, | S0328: 1, H0518: 1, | S0152: 1, S3014: 1, | S0032: 1, L0744: 1, | L0747: 1, L0750: 1, | L0777: 1, H0595: 1, | L0599: 1, H0667: 1 and | H0423: 1. | S0136: 47, L0769: 10, | L0439: 7, L0750: 7,                    | H0620: 5, L0776: 5, | H0519: 5, L0740: 5, | L0752: 5, H0341: 4, | H0545: 4, S0440: 4, | L0805: 4, L0509: 4, | L0809: 4, L0666: 4, | L0748: 4, S0436: 4, | H0624: 3, H0265: 3, | H0556: 3, S0418: 3, | H0393: 3, L0717: 3, | H0266: 3, S0422: 3, | L0764: 3, L0659: 3, |
| Leu-516 to Gln-522, S0036: 1 | Glu-528 to Asn-537. H0591: 1, H0494: |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Ser-93 to Pro-99,     | Asn-214 to Gly-220, L0439: 7, L0750: 7 | Thr-255 to Ala-268. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                              |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 3128                  |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |
|                              |                                      |                     | •                   |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                        |           | 3 - 830               |  |                     |                     |                     | •                   |                     |                     | •                   |                     |                     |                     |                     |                     |
|                              |                                      |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 953                   |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                              |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1062260               |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                              |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HPCQK37               | ,                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|                    |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                    | -                   |                     |                     |                     |                     |               |                      |                     | -                   |                     |                  |                  |                  |                  |                     | _                |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |               |                      |                     |                     |                     |                  |                  |                  |                  |                     | -                |
| 75: 3,             | 34: 3,              | 56: 2,              | 60: 2,              | 87: 2,              | 60: 2,              | 146: 2,             | 32: 2,              | 169: 2,             | 135: 2,             | 113: 2,             | 346: 2,             | 03: 2,              | 65: 2,             | 59: 2,              | 28: 2,              | 80: 2,              | 56: 2,              | 58: 2,              | L0589: 2,     | 94: 2,               | 543: 2,             | 40: 1,              | 295: 1,             | 02: 1,           | 346: 1,          | 564: 1,          | 589: 1,          | 42: 1,              | 4: 1,            |
| H0696: 3, L0755: 3 | .0731: 3, S0434: 3, | S0026: 3, S0356: 2, | 50358: 2, S0360: 2, | S0045: 2, H0587: 2, | H0574: 2, T0060: 2, | S0010: 2, H0046: 2, | H0510: 2, H0032: 2, | H0673: 2, H0169: 2, | H0674: 2, H0135: 2, | H0038: 2, H0413: 2, | H0646: 2, L0646: 2, | .0766: 2, L0803: 2, | 5622: 2, L0665: 2, | 30374: 2, H0659: 2, | H0648: 2, S0328: 2, | S0378: 2, S0380: 2, | S3014: 2, L0756: 2, | .0777: 2, L0758: 2, | .0588: 2, LOS | .0592: 2, L.0594: 2, | .0603: 2, H0543: 2, | H0171: 1, S0040: 1, | H0717: 1, H0295: 1, | 70049: 1, L0002: | H0657: 1, H0346: | H0255: 1, H0664: | H0305: 1, H0589: | S0420: 1, S0442: 1, | S0376: 1, S0444: |
| EE<br> <br>        | ğ                   | SO                  | <u>SO:</u>          | SO                  | A<br>H              | <u>SO</u>           | R                   | 黑                   | OH<br>H             | EH CH               | <u>H</u>            | <u>r</u> é          | <u>1</u>           | SO:                 | <u>H</u>            | <u>80</u>           | <u>83</u>           | <u>3</u>            | 3             | <u>3</u>             | <u>3</u>            | 丑                   | 丑                   | <u>요</u>         | <u> </u>         | H                | <u>유</u>         | <u>80</u>           | SO               |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |               |                      |                     |                     |                     |                  |                  |                  | •                |                     |                  |
| -                  | ·                   |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     | -                  |                     |                     |                     | <u> </u>            |                     |               |                      |                     | •                   |                     |                  |                  | -                |                  |                     |                  |
|                    |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                    | •                   |                     |                     |                     |                     |               |                      |                     |                     |                     |                  | •                |                  |                  |                     |                  |
|                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     | _                   |                     |               |                      | •                   |                     |                     |                  |                  |                  |                  |                     |                  |
|                    |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |               |                      |                     |                     |                     |                  |                  |                  |                  |                     |                  |
|                    | ÷.                  |                     |                     |                     |                     |                     | •                   |                     | •                   |                     |                     |                     |                    |                     |                     | _                   |                     | •                   |               |                      |                     |                     |                     |                  |                  |                  |                  |                     |                  |
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|                    | <u>.</u>         |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | _                |          |                  |                  |                    |                  |
|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|------------------|------------------|--------------------|------------------|
|                    | •                |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    | •     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  | _                |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  | _                |                  |                  |                  |                  |                  |                  |                  |                  |          | _                |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
| <del> </del>       |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
| _ ا                | <u>,</u>         |                  | 1,               | 1,               | 1,               | Ι,               | 1,               | ŗ,                 | 1,    | 1,               | 1,               | 1,               | . (              |                  |                  | 1,               | 1,               | <del>-</del> ,   |                  | <u>_</u>         | 7,               | 1,               | <del>-</del>     | 1,               | T,       | <u>, </u>        | •                | T,                 | 1,               |
| H0675: 1, S0410: 1 | 46: ]            | 25: ]            | 33:              | 31:              | 86:              | :27:             | 75:              | H0590: 1, S0182: 1 | 96:   | 70110: 1, H0546: | 72:              | H0571: 1, H0024: | 73:              | 28: 1            | 52: ]            | 22:              | 31:              | 28:              | 2                | 24:              | ;<br>00          | 90:              | 51:              | 33:              | 41:      | 61:              | 50: 1            | S0438: 1, H0509: 1 | H0132: 1, H0647: |
| 88                 | H0730: 1, S0046: | S0132: 1, H0592: | H0586: 1, H0333: | H0642: 1, H0331: | H0632: 1, H0486: | H0013: 1, H0427: | .0021: 1, H0575: | S01                | H05   | H05              | .0157: 1, H0572: | HOO              | .0695: 1, H0373: | .0163: 1, S6028: | 30003: 1, H0252: | H0328: 1, H0622: | 70006: 1, H0031: | H0553: 1, H0628: | H0166: 1, S0364: | .0455: 1, H0124: | H0598: 1, H0400: | H0163: 1, H0090: | H0616: 1, H0551: | 70067: 1, H0433: | , T0041: | H0625: 1, H0561: | S0448: 1, S0450: | H05                | H06              |
| 1.                 | ): 1,            | 1,               | 5: 1,            | ?: 1,            | 1;               | :: 1,            | .1               | ): 1,              | i: 1, | <u>.</u>         | : <b>1</b> ,     | .: 1,            | 1,               | . I,             | <del>-</del>     | 3: 1,            | 1,               | »: 1,            | . I,             | <u></u>          | 3: 1,            | 3: 1,            | 5: 1,            | <u>.</u>         | . i.     | . I,             | 1,               | <u></u>            | .;<br>-;         |
| 567                | 0730             | 132              | 0586             | 2642             | 0632             | 0013             | 0021             | 0590               | 3085  | )110             | 1157             | 0571             | 5695             | )163             | 903              | 0328             | 900              | 0553             | 0166             | 3455             | 3650             | 0163             | 9616             | 7900             | H0100: 1 | 0625             | 448              | )438               | 0132             |
| 革                  | Ĭ                | S                | Ħ                | Ħ                | 王                | 王                | <u> </u>         | 王                  | Ϊ     | ĭ                | <u> </u>         | Ĭ                | <u> </u>         | <u> </u>         | <u>8</u>         | Ï                | Ĕ                | 王                | 王                | <u> </u>         | Ĭ                | 王                | 王                | Ĕ                | 王        | 王                | <u>8</u>         | <u>8</u>           | 三                |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  | •                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
| <u> </u>           |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  | •                |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
| L                  |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
| l                  |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  | ٠                |                  |                  |                  | •                |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
| ļ                  |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  | •                |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  | _                |                  | _                |                  |                    | _     |                  | _                |                  | <del></del> ,    | •                |                  |                  |                  |                  |                  | ····             |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  | •                  |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    | ,                |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  | •                  |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |
|                    |                  |                  |                  |                  |                  |                  |                  |                    |       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |                  |                  |                    |                  |

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|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|---------------------|--------------------------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                                      |                     |
| H0649: 1, S0208: 1, | H0529: 1, L0770: 1, | L0637: 1, L0772: 1, | L0372: 1, L0800: 1, | L0374: 1, L0662: 1, | L0649: 1, L0388: 1, | L0774: 1, L0775: 1, | L0375: 1, L0653: 1, | L0628: 1, L0513: 1, | L0526: 1, L0518: 1, | L0382: 1, L0663: 1, | L0664: 1, L0565: 1, | L0438: 1, H0547: 1, | H0690: 1, H0435: 1, | H0660: 1, H0666: 1, | S0330: 1, S0044: 1, | S0406: 1, H0436: 1, | H0479: 1, S0037: 1, | S0206: 1, L0747: 1, | L0780: 1, L0753: 1, | L0757: 1, L0759: 1, | H0445: 1, H0707: 1, | L0485: 1, L0608: 1, | L0595: 1, H0667: 1, | L0097: 1, S0196: 1 and | S0446: 1. | H0052: 3, H0050: 2, | Į                   | S0212: 1, S0358: 1,                  | S0045: 1, H0586: 1, |
|                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | :                   |                     |                     |                     |                     |                        |           | Glu-27 to Thr-34,   | His-253 to Tyr-281, | Glu-290 to Asp-295. S0212: 1, S0358: |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 3129                |                     |                                      |                     |
|                     |                     |                     |                     | i                   |                     | •                   | •                   |                     |                     | ,                   | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 977-3               |                     |                                      |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 954                 |                     |                                      |                     |
|                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1062309             |                     |                                      |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     | ,                   |                     |                     |                        |           | HCE4F10             |                     |                                      |                     |

| H0575: 1, H0046: 1,<br>H0292: 1, H0328: 1,<br>H0622: 1, H0135: 1,<br>L0766: 1, S0374: 1,<br>H0648: 1, H0539: 1,<br>H0521: 1, L0750: 1,<br>L0591: 1, H0542: 1 and<br>S0460: 1. | Ser-4 to Gln-21, S0358: 1, H0370: 1, His-33 to Pro-38, H0270: 1, H0122: 1, Arg-80 to Ser-87, H0253: 1, H0545: 1, Lys-133 to Tyr-139, H0046: 1, H0015: 1, Gln-162 to Phe-168, L0669: 1, H0617: 1, Ala-173 to Lys-179, H0032: 1, H0038: 1, Glu-198 to Glu-204, H0616: 1, H0658: 1, Ala-212 to Asn-218, S0436: 1 and L0596: 1. Ser-238 to Arg-245. | L0439: 5, L0764: 2,<br>H0660: 2, L0749: 2,<br>S0031: 2, L0591: 2,<br>H0486: 1, L0471: 1,<br>H0424: 1, H0135: 1,<br>L0763: 1, L0769: 1,<br>L0639: 1, L0771: 1,<br>L0375: 1, L0784: 1,<br>L0776: 1, H0478: 1 and<br>L0747: 1. | AR060: 2, AR061: 2,<br>AR055: 1, AR096: 1,<br>AR033: 1, AR039: 1, |
|---|---|---|---|
|   | Ser-4 to Gln-21,<br>His-33 to Pro-38,<br>Arg-80 to Ser-87,<br>Lys-133 to Tyr-139,<br>Gln-162 to Phe-168, L0669: 1, H0617: 1,<br>Ala-173 to Lys-179, H0032: 1, H0617: 1,<br>Glu-198 to Glu-204, H0616: 1, H0658: 1,<br>Ala-212 to Asn-218, S0436: 1 and L0596,<br>Ser-238 to Arg-245.  | Arg-1 to Pro-12,<br>Leu-29 to Gln-41.   |   |
|   | 3130  | 3131  | 3132  |
|   | 32 - 790  | 409 - 248   | 574 - 1419  |
|   | 955   | 956   | 957   |
|   | 1062328   | 1062346   | 1062369   |
|   | нвсве63   | HSSJO19   | HE8NQ23   |

|                     | ,                                |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     | <u> </u>            | -                   |                     |   |                     |                     |                     |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     | ·                                |                     |                     |                     |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |   |                     |                     |                     |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| AR089: 0, AR104: 0, | AR053: 0<br>L0665: 12. L0666: 5. | L0794: 4, L0664: 4, | L0759: 4, H0574: 3, | L0657: 3, H0031: 2, | H0553: 2, H0624: 1, | H0632: 1, H0013: 1, | H0328: 1, L0598: 1, | L0369: 1, L0645: 1, | L0662: 1, H0144: 1, | H0660: 1 and S0406: 1. | L0766: 5, L0748: 5, | L0362: 4, L0755: 3, | H0170: 2, H0265: 2, | H0328: 2, H0494: 2, |   | L0750: 2, L0731: 2, | _                   | H0657: 1, S0001: 1, |                            | H0329: 1, S0007: 1, | L0717: 1, T0039: 1, | L0021: 1, H0097: 1, | H0544: 1, L0163: 1, | S0388: 1, S0051: 1, | H0266: 1, S0003: 1, | S0214: 1, H0615: 1, | H0616: 1, H0269: 1, | H0623: 1, T0041: 1, |
|                     |                                  |                     |                     |                     |                     |                     |                     |                     |                     |                        | Ala-24 to Glu-29,   | Glu-91 to Arg-110,  | Arg-115 to Trp-124, |                     |   | Lys-209 to Asp-215, | Gly-224 to Thr-230; | Pro-254 to Phe-261, | Thr-266 to Asp-285, H0638: |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |
|                     | ····                             |                     |                     |                     |                     |                     |                     |                     |                     | <del>,</del>           | 3133                |                     |                     |                     | _ |                     |                     |                     |                            |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |
|                     |                                  |                     |                     |                     |                     |                     |                     | -                   |                     | -                      | 95 - 949            |                     |                     |                     |   | ,                   |                     |                     |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                                  |                     |                     |                     |                     |                     |                     |                     |                     |                        | 958                 |                     |                     |                     |   |                     |                     |                     |                            |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|                     |                                  |                     | •                   |                     |                     |                     |                     |                     |                     |                        | 1062431             |                     |                     |                     |   |                     |                     |                     |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                                  |                     |                     |                     |                     |                     | .,                  |                     |                     |                        | HTELJ95             |                     |                     |                     |   |                     |                     |                     |                            |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|  |                     |                     |                     |                     |                     |                     |                        |           |                     |                   |                   |                    |                     |                     |   |                     | •                   |  |   |                     |                     |                     |                     |                     |     |                     |                     |                     |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|-------------------|-------------------|--------------------|---------------------|---------------------|---|---------------------|---------------------|--|---|---------------------|---------------------|---------------------|---------------------|---------------------|-----|---------------------|---------------------|---------------------|
|  |                     |                     | •                   |                     |                     |                     |                        |           |                     |                   |                   |                    |                     |                     | _                                       |                     |                     |  |   |                     |                     |                     | ,                   |                     |     |                     | •                   |                     |
| T0042: 1, H0538: 1,<br>S0422: 1, L0763: 1, | L0794: 1, L0803: 1, | L0375: 1, H0144: 1, | H0659: 1, S0330: 1, | L0756: 1, L0780: 1, | L0752: 1, L0588: 1, | L0592: 1, H0668: 1, | H0422: 1, L0697: 1 and | S0384: 1. | AR096: 4, AR055: 4, |                   |                   |                    | AR104: 2, AR039: 1  | L0747: 5, H0623: 4, | S0212: 3, S0045: 3,                     | H0586: 3, H0427: 3, | S0028: 3, L0439: 3, | L0749: 3, L0599: 3,                    | L0415: 2, S0046: 2,                     | H0553: 2, H0412: 2, | L0662: 2, L0659: 2, | S0146: 2, H0713: 1, | H0716: 1, T0049: 1, | H0662: 1, S0356: 1, | , , | S0280: 1, H0575: 1, | H0024: 1, H0375: 1, | H0266: 1, H0428: 1, |
|  |                     |                     |                     |                     |                     |                     |                        |           | Pro-9 to Lys-24,    | Ser-39 to Lys-46, | Asp-80 to Asn-86, | Gln-89 to Ser-103, | Phe-112 to Thr-123, | GIn-260 to Ser-272, | Asp-283 to His-289, S0212: 3, S0045: 3, | Pro-341 to Glu-351, | Met-362 to Thr-368, | Arg-382 to Arg-389, L0749: 3, L0599: 3 | Asn-396 to Gly-410, L0415: 2, S0046: 2, | Tyr-415 to His-427, | lle-477 to Lys-486, | Tyr-575 to Thr-580, |                     | •                   |     |                     |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                        |           | 3134                |                   |                   |                    |                     |                     |   |                     |                     |  |   |                     |                     |                     |                     |                     |     |                     |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                        |           | 3 - 2138            |                   |                   |                    |                     |                     |   |                     |                     |  |   |                     |                     |                     |                     |                     |     |                     |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                        |           | 959                 |                   |                   |                    |                     |                     |   |                     |                     |  |   |                     |                     |                     |                     |                     |     |                     |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                        |           | 1062435             |                   |                   |                    |                     |                     |   |                     |                     |  |   |                     |                     |                     |                     |                     |     |                     |                     |                     |
|  |                     |                     |                     |                     |                     |                     |                        |           | HTPCP50             |                   |                   |                    |                     |                     |   |                     |                     |  |   |                     |                     |                     |                     |                     |     |                     |                     |                     |

|   | =   |
|---|---|
| H0039: 1, T0006: 1,<br>H0032: 1, H0090: 1,<br>H0268: 1, H0413: 1,<br>H0509: 1, L0375: 1,<br>L0789: 1, L0666: 1,<br>S0126: 1, H0670: 1,<br>H0539: 1, H0521: 1,<br>S0032: 1, L0754: 1,<br>L0779: 1, L0759: 1, | L0777: 6, S0358: 3,<br>L0372: 3, L0750: 3,<br>L0755: 3, S0422: 2,<br>L0766: 2, L0663: 2,<br>S0152: 2, L0779: 2,<br>L0588: 2, L0605: 2,<br>H0685: 1, H0341: 1,<br>H0255: 1, S0376: 1,<br>S0410: 1, H0592: 1,<br>L0471: 1, H0873: 1,<br>S0214: 1, H0615: 1,<br>H0509: 1, L0764: 1,<br>L0769: 1, L0764: 1,<br>L0771: 1, L0773: 1,<br>L0773: 1, L0773: 1,<br>L0775: 1, L0655: 1,<br>L0775: 1, L0665: 1, |
|   | Gly-1 to His-6, Thr-55 to Gln-61, Cys-63 to Asp-70, Gly-132 to Gly-137, Lys-146 to Gly-152, Pro-174 to Lys-182.   |
|   | 3135  |
|   | 779 - 201   |
|   | 096   |
|   | 1062496   |
|   | HKGBU67   |

| H0697: 1, H0520: 1, | H0435: 1, S0044: 1, | H0555: 1, L0747: 1, | L0749: 1, L0753: 1, | L0759: 1, H0445: 1, | L0581: 1, H0423: 1 and | H0712: 1. |                   | AR055: 3, AR096: 3, | AR060: 2, AR053: 2, | AR104: 2, AR061: 1, | AR033: 1            | L0439: 6, H0620: 4, | L0758: 2, S0040: 1, | H0661: 1, H0619: 1,                  | H0549: 1, H0587: 1, | H0013: 1, L0021: 1, | H0230: 1, H0373: 1, | H0135: 1, L0770: 1, | L0769: 1, L0776: 1, | L0659: 1, L0783: 1, | H0144: 1, H0519: 1, | H0593: 1, H0682: 1, | H0659: 1, L0751: 1, | L0753: 1 and L0759: 1. | H0624: 5, L0748: 4, | S0222: 3, H0441: 2, | H0013: 2, H0144: 2, | L0745: 2, H0170: 1, | H0171: 1, S0007: 1, |
|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     | -                      |           | Pro-10 to Val-15, | Ala-42 to Lys-48,   | Asn-99 to Glu-104,  | Ile-114 to Gln-119, | Asp-130 to Gly-137, | Leu-167 to Tyr-175, | Pro-187 to Glu-192, | Arg-219 to Pro-224, H0661: 1, H0619: | Ala-233 to Thr-240. |                     |                     | -                   |                     |                     |                     |                     |                     |                        |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | 3136              |                     |                     |                     |                     |                     |                     |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 3137                |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | 2 - 1663          |                     |                     |                     |                     |                     |                     |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1300 -              | 1079                |                     | •                   |                     |
|                     |                     |                     |                     |                     |                        |           | 961               |                     |                     | ٠                   |                     |                     |                     |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 362                 |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | 1062544           |                     |                     | •                   |                     |                     |                     |                                      |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                        | 1062574             |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | HFKIT82           |                     |                     |                     |                     |                     |                     |                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | HE2LW42             |                     |                     |                     |                     |

|  | 192340,<br>234200   |
|--|---|
| ·  | 20p13   |
| H0156: 1, L0471: 1,<br>H0051: 1, H0604: 1,<br>H0135: 1, S0386: 1,<br>L0521: 1, L0776: 1 and<br>L0754: 1. | 5, H0264: 5, 5, L0439: 5, L0439: 5, L0752: 4, 4, L0752: 4, 4, L0752: 4, 3, H0163: 3, 3, H0435: 3, 3, L0747: 3, 3, S0040: 2, H0549: 2, H0549: 2, H0549: 2, H0566: 2, 2, H0644: 2, 2, H0644: 2, 2, L0771: 2, 2, 2, L0771: 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, |
|  | Glu-46 to Ser-59,<br>Asn-85 to Ser-98.  |
|  | 3138  |
|  | 141 - 2561  |
|  | 698   |
|  | 1062586   |
|  | HOGCE44   |

|                     | _                   |                      | -                   |                     |                     | •                   |                     |                     |                     | <u>.</u>            |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |                   | ,                   |                     |  |                     | ·                   |
|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|---------------------|---------------------|--|---------------------|---------------------|
|                     |                     |                      |                     |                     |                     |                     |                     |                     | -                   |                     | _                   |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                   |                     |                     | <u>.                                      </u> | :                   |                     |
| H0518: 2, S0404: 2, | S3014: 2, S0028: 2, | .0741: 2, L.0751: 2, | .0750: 2, S0434: 2, | .0605: 2, L0591: 2, | .0362: 2, H0624: 1, | H0171: 1, H0265: 1, | S6024: 1, S0134: 1, | H0583: 1, L0414: 1, | S0282: 1, H0402: 1, | S0356: 1, S0442: 1, | S0376: 1, S0132: 1, | H0619: 1, L0717: 1, | H0437: 1, H0550: 1, | H0600: 1, H0587: 1, | H0486: 1, T0114: 1, | H0635: 1, S0280: 1, | H0042: 1, H0575: 1, | H0590: 1, T0048: 1, | H0581: 1, H0052: 1, | H0596: 1, H0009: 1, | .0471: 1, T0010: 1, | S6028: 1, H0188: 1, | H0428: 1, L0483: 1, | 553: 1, H0032: 1, | H0674: 1, H0124: 1, | S0036: 1, H0090: 1, | H0591: 1, H0038: 1,                            | H0616: 1, H0551: 1, | H0268: 1, H0623: 1, |
| HO:                 | )SS                 | <u>101</u>           | LOT                 | Tog                 | 101                 | HO                  | )9 <u>S</u>         | HO                  | 202                 | 203                 | 203                 | HO                  | OH HO               | HO                  | HO                  | HO                  | OH HO               | HO                  | HO                  | HO                  | 70 <u>7</u>         | )9 <u>S</u>         | )HO                 | HO                | OH                  | )OS                 | HO   | OH                  | HO                  |
|                     |                     |                      | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>       |                     |                     |  | _                   |                     |
|                     |                     |                      |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     | <del></del>         |                     | •                   |                   |                     |                     |  | ;                   | :                   |
|                     | **                  |                      | <del></del>         |                     |                     |                     | -                   |                     |                     |                     | _                   |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                   |                     |                     |  |                     |                     |
|                     |                     |                      | -                   | •••                 |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     | <u>.</u>            |                     |                     | ÷                   |                   |                     | ····                |  |                     |                     |

|                     |                     |                     |          |                     |                     |                     |    |                     |                     | . •                 |                     |                     |                     |                     |                     |                     |                     |                     |                        | 107741,             | 113900,             | 122720,             | 122720,             | 126340,             | 126391,             | 160900,              | 164731,             | 172400,             |
|---------------------|---------------------|---------------------|----------|---------------------|---------------------|---------------------|----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|
|                     |                     |                     |          |                     |                     |                     | •  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 19q13.1-            | q13.2               |                     |                     |                     |                     | •                    | ,                   |                     |
| H0100: 1, H0560: 1, | S0422: 1, S0426: 1, | L0762: 1, L0763: 1, | <u>~</u> | L0772: 1, L0768: 1, | L0794: 1, L0766: 1, | L0775: 1, L0375: 1, | l, | L0519: 1, L0789: 1, | L0791: 1, L0666: 1, | L0664: 1, S0374: 1, | S0126: 1, H0689: 1, | H0659: 1, H0521: 1, | S0176: 1, S0406: 1, | H0436: 1, L0759: 1, | S0031: 1, S0260: 1, | S0436: 1, L0608: 1, | S0011: 1, S0242: 1, | S0194: 1, S0276: 1, | H0542: 1 and S0460: 1. | L0777: 5, L0750: 4, | L0758: 4, H0549: 2, | H0550: 2, H0333: 2, | H0687: 2, H0688: 2, | L0809: 2, L0743: 2, | H0265: 1, H0556: 1, | \$0358: 1, H0645: 1, | H0599: 1, H0575: 1, | H0618: 1, H0123: 1, |
|                     |                     |                     |          |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | His-30 to His-35.   |                     |                     |                     |                     |                     |                      |                     |                     |
|                     |                     |                     |          |                     |                     |                     |    | <del>-</del>        |                     | -                   |                     |                     |                     |                     |                     |                     |                     | •                   |                        | 3139                |                     |                     |                     |                     |                     |                      |                     |                     |
|                     |                     |                     |          |                     |                     |                     |    |                     |                     |                     |                     | _                   | ,                   |                     |                     |                     |                     |                     |                        | 547 - 1782          |                     |                     |                     |                     |                     |                      |                     |                     |
|                     |                     |                     |          |                     |                     |                     |    |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                        | 964                 |                     | _                   |                     |                     |                     |                      |                     |                     |
|                     |                     |                     |          |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | 1062626             |                     |                     |                     |                     |                     |                      |                     |                     |
|                     |                     | -                   |          |                     |                     |                     |    |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                        | HOVJJ72             |                     |                     |                     |                     |                     |                      |                     |                     |

| 172400,<br>173850,<br>180901,<br>180901,<br>207750,   | 248600,<br>258501,                         | 600918,<br>602716                          |                                  |                     |                   |                   | 126060,             | 143200,             | 143200,             | 181510,             | 253200,             | 268800,             | 268800,             | 600354,             | 600354,             | 600354              |                     |                     |                     |                     |
|---|--|--|----------------------------------|---------------------|-------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| ·   |  |  |                                  |                     |                   |                   | 5q13                |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |
| H0428: 1, H0163: 1,<br>H0646: 1, L0770: 1,<br>L0769: 1, L0637: 1,<br>L0772: 1, L0774: 1,<br>L0378: 1, L0806: 1, | H0539: 1, S0190: 1,<br>H0540: 1, L0744: 1, | L0748: 1, L0747: 1,<br>L0779: 1, L0780: 1, | L0731: 1, S0276: 1 and S0424: 1. | H0328: 2 and H0581: | <u></u>           |                   | H0328: 9, L0659: 7, | L0662: 6, H0135: 4, | L0750: 4, S0360: 3, | H0329: 3, H0373: 3, | L0375: 3, L0744: 3, | H0392: 2, H0046: 2, | S0364: 2, H0163: 2, | H0100: 2, L0743: 2, | S0356: 1, S0222: 1, | H0486: 1, H0618: 1, | H0439: 1, L0471: 1, | S0362: 1, H0038: 1, | L0520: 1, L0769: 1, | L0637: 1, L0650: 1, |
| ,   |  |  |                                  | Gln-1 to Glu-8,     | Ser-17 to Asn-23, | Glu-48 to Leu-54, | Ala-1 to Ser-6,     | Thr-16 to Gln-23,   | Pro-28 to Asn-34,   | Glu-43 to Cys-49,   | Asp-95 to Gly-100.  |                     |                     |                     |                     |                     |                     |                     | •                   |                     |
|   | ,  |  |                                  | 3140                |                   |                   | 3141                | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |  |  |                                  | 3 - 326             |                   |                   | 1 - 1392            |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |
|   |  |  |                                  | 965                 |                   |                   | 996                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   |  |  |                                  | 1062628             |                   |                   | 1062629             |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |
|   |  |  |                                  | HODBT14             |                   |                   | HBOEB83             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                   |                   | _                   |                     |                        |           |                   |                       |                       |                       |                       |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|-------------------|-------------------|---------------------|---------------------|------------------------|-----------|-------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                   |                   |                     |                     |                        |           |                   |                       |                       |                       | ,                     |                         |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     | •                   |                     | •                   |                     |                     |
| 1 0789 1 1 0664 1 | H0144: 1 H0690: 1 | H0660: 1, S0028: 1, | L0740: 1, L0759: 1, | L0589: 1, S0242: 1 and | H0352: 1. | AR039: 26, AR033: | 17, AR104: 17, AR052: | 15, AR053: 15, AR096: | 14, AR060: 14, AR089: | 13, AR055: 12, AR061: | <br>H0617: 8, L0747: 8, | L0769: 6, L0665: 5, | L0758: 5, L0717: 4, | L0794: 4, L0766: 4, | L0659: 4, L0748: 4, | H0181: 3, H0494: 3, | L0638: 3, L0666: 3, | H0658: 3, L0750: 3, | L0757: 3, H0657: 2, | H0255: 2, H0431: 2, | H0318: 2, H0328: 2, | T0006: 2, H0396: 2, | S0426: 2, L0770: 2, | L0771: 2, L0375: 2, | L0805: 2, L0657: 2, | L0384: 2, H0659: 2, | L0744: 2, L0756: 2, | L0779: 2, L0759: 2, |
|                   |                   |                     |                     |                        |           | Lys-1 to Glu-7,   | Thr-20 to Glu-35,     | Ser-54 to Glu-62.     |                       |                       |                         |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |                   |                     |                     |                        |           | 3142              |                       |                       |                       |                       |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |                   |                     |                     |                        |           | 2 - 541           |                       |                       |                       |                       |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
|                   |                   |                     |                     |                        |           | 196               |                       |                       |                       |                       |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                   |                   |                     |                     |                        |           | 1062631           |                       |                       |                       |                       |                         |                     | •                   | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ·                   |                     |                     |
|                   |                   |                     |                     |                        |           | HODCT96           |                       | ,                     |                       |                       | <br>                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |

|                     | -                   |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     | · · · · · · · · · · · · · · · · · · · |                     |                     |                     | <u>-</u> -          |                     |                     |                     |   |                     |   |                      |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|---------------------|---|----------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                                       |                     |                     | -                   |                     | •                   | ÷                   |                     |   |                     |   |                      |                     |                     |                     |                     |
| .0596: 2, L0588: 2, | .0599: 2, L0593: 2, | S0026: 2, H0265: 1, | H0685: 1, H0341: 1, | H0663: 1, S0418: 1, | S0356: 1, S0358: 1, | S0360: 1, S0132: 1, | [0411: 1, H0550: 1, | S0222: 1, H0441: 1, | L0477: 1, L0021: 1, | S0346: 1, T0048: 1, | H0309: 1, H0009: 1, | H0172: 1, L0483: 1, | H0031: 1, H0628: 1, | H0673: 1, H0674: 1,                   | H0040: 1, H0551: 1, | H0412: 1, T0004: 1, | H0102: 1, L0351: 1, | H0280: 1, H0560: 1, | H0633: 1, S0344: 1, | .0762: 1, L0501: 1, | L0372: 1, L0764: 1, |   | .0650: 1, L0806: 1, |   | .0783: 1, L.0790: 1, | .2269: 1, L0565: 1, | .0438: 1, H0547: 1, | H0689: 1, H0435: 1, | Н0660: 1, Н0672: 1, |
|                     | <u> </u>            | <u> </u>            |                     | <u>H</u>            | Š                   | <u>S</u>            | <u>H</u>            | <u> </u>            | <u> </u>            | <u>.</u>            | <u> </u>            | <u> </u>            | <u> </u>            | <u> </u>                              | <u>H</u>            | <u>H</u>            | <u> </u>            | <u> </u>            | H                   | 7                   | <u> </u>            | 1 | <u>, </u>           | 7 | <u>, </u>            | <u>ii</u>           | <u> </u>            | H                   | H                   |
|                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                                       |                     |                     |                     | -                   |                     | •                   |                     |   |                     |   |                      |                     |                     | ,                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                                       |                     |                     |                     |                     |                     |                     |                     |   | -                   |   | -                    |                     | -                   |                     |                     |
|                     | <del></del>         | <del>.</del>        | <del></del> .       | <u>.</u>            |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                                       |                     | -                   |                     | <del></del>         |                     |                     |                     |   |                     |   | <del></del> -        | <del></del>         |                     |                     |                     |
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|  |   | 107250,<br>181600,<br>189800,<br>266300   |
|--|---|---|
|  |   |   |
|  |   | 4q31  |
| S0330: 1, S0406: 1,<br>H0576: 1, L0742: 1,<br>L0439: 1, L0740: 1,<br>L0751: 1, L0754: 1,<br>L0749: 1, L0752: 1,<br>L0755: 1, L0731: 1,<br>S0031: 1, H0445: 1,<br>L0587: 1, L0592: 1,<br>L0485: 1, L0592: 1,<br>L0601: 1, H0668: 1, | S0360: 2, H0266: 2,<br>S0330: 2, L0748: 2,<br>H0556: 1, S0442: 1,<br>S0358: 1, S0046: 1,<br>L0471: 1, H0024: 1,<br>H0634: 1, H0494: 1,<br>H0560: 1, L0800: 1,<br>L0803: 1, H0593: 1,<br>H0435: 1, H0651: 1,<br>H0521: 1, H0522: 1,<br>S0406: 1, L0747: 1 and<br>S0452: 1.   | S0422: 8, H0710: 8,<br>S0116: 7, L0471: 7,<br>H0542: 7, H0580: 6,<br>T0042: 6, H0547: 6,<br>H0659: 6, L0748: 6,<br>H0486: 5, H0543: 5,<br>H0656: 4, H0341: 4, |
|  | Asp-32 to Leu-43, S0360: 2, H0266: Leu-47 to Arg-53, S0330: 2, L0748: 2 Glu-95 to Phe-102, H0556: 1, S0442: 3 Leu-123 to Val-130, S0358: 1, S0046: 1 Leu-146 to Gly-154, L0471: 1, H0024: Asp-186 to Glu-192, H0634: 1, H0494: Glu-246 to Ser-255, H0560: 1, L0800: Asp-296 to Arg-302, L0803: 1, H0593: Ser-334 to Ala-347. H0435: 1, H0551: H0521: 1, H0522: S0406: 1, L0747: 1 S0452: 1. | Thr-1 to Glu-10, Arg-20 to Leu-26, Gly-37 to Ser-49, Cys-58 to Ser-69, Lys-79 to Lys-85, Ser-88 to Glu-96, Ala-99 to Ser-135,                                 |
| ·  | 3143  | 3144  |
|  | 60 - 1124   | 83 - 814  |
|  | 896   | 696   |
|  | 1062655   | 1062679   |
|  | HTXJE60   | HUSIQ62   |

|   |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     | •                   |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |
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| S0360: 4, S0440: 4,                     | S0406: 4, L0747: 4, | S0444: 3, H0318: 3, | H0581: 3, H0428: 3, | H0551: 3, L0667: 3, | L0662: 3, L0766: 3, | L0655: 3, L0666: 3, | L0749: 3, L0758: 3, | L0362: 3, H0668: 3, | T0002: 2, H0650: 2, | H0662: 2, H0393: 2, | H0497: 2, H0013: 2, | H0266: 2, H0412: 2, | S0150: 2, H0529: 2, | L0646: 2, L0375: 2, | L0606: 2, H0144: 2, | H0698: 2, H0521: 2, | L0740: 2, L0750: 2, | L0588: 2, L0605: 2, | L0608: 2, S0192: 2, | H0170: 1, L0615: 1, | H0686: 1, H0685: 1, | S0040: 1, H0663: 1, | H0402: 1, H0449: 1, | H0459: 1, S0418: 1, | S0420: 1, S0358: 1, | S0376: 1, H0369: 1, | H0069: 1, L0021: 1, | T0082: 1, H0421: 1, | H0744: 1, H0251: 1, |
| Ser-142 to Glu-151, S0360: 4, S0440: 4, | Ser-169 to Lys-192, | Ala-199 to Glu-244. |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | _                   |                     | _                   | ,                   |                     | · · ·               |                     |                     |                     |                     |                     |                     |                     | •                   |                     | <del></del>         | -                   |                     |                     |                     |                     |                     |                     |                     | <u></u>             |                     |                     |                     |                     |
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|--------------|------------------|------------------|----------|------------------|------------------|------------------|------------------|------------------|-------------|--------------|--------------|--------------|-----------|--------------|--------------|--------------|--------------|--------------|--------------|------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                  |                  |          |                  |                  |                  |                  |                  |             |              |              |              |           |              |              |              |              |              |              |                  |             |                  |                  | •                |                  |                  |                  |                  |                  |
|              |                  |                  |          |                  |                  |                  |                  |                  |             |              |              |              |           |              |              |              |              |              |              |                  |             |                  |                  |                  |                  |                  |                  |                  | ļ                |
| <br>         |                  |                  |          |                  |                  |                  |                  |                  |             |              | -            |              | •         |              |              |              |              |              |              |                  |             |                  | •                | · · ·            |                  |                  |                  |                  |                  |
| 1, H0620: 1, | 0629: 1,         | 0267: 1,         | 0553: 1, | 0163: 1,         | 0040: 1,         | 0413: 1,         | 0560: 1,         | 0641: 1,         | L0769: 1,   | 1, L0761: 1, | 1,0372: 1,   | L0768: 1,    | .0774: 1, | L0652: 1,    | l, L0656: 1, | 5623: 1,     | 1, L0790: 1, | , L0663: 1,  | 1, L0665: 1, | 0699: 1,         | , H0723: 1, | 0520: 1,         | 0126: 1,         | 0683: 1,         | 0660: 1,         | 0328: 1,         | 0696: 1,         | 0779: 1,         | 0445: 1,         |
| H0457: 1, H  | H0350: 1, H0629: | H0375: 1, H0267: | 52: 1, H | S0366: 1, H0163: | H0090: 1, H0040: | H0264: 1, H0413: | .0475: 1, H0560: | H0561: 1, H0641: | H0538: 1, L | L5575: 1, L( | .0373: 1, LO | .0800: 1, L( | Ι,        | .0806: 1, L( | .0657: 1, LU | .3872: 1, L. | .0789: 1, LO | .0792: 1, L( | L0664: 1, L0 | H0702: 1, H0699: | S0374: 1, H | H0726: 1, H0520: | H0519: 1, S0126: | H0682: 1, H0683: | H0684: 1, H0660: | H0666: 1, S0328: | S0380: 1, H0696: | .0744: 1, L0779: | .0755: 1, H0445: |
| E            | H03              | H03              | H02      | S03              | <u>H00</u>       | H02              | <u>1</u>         | H05              | HOS         | 1.55         | <u>103</u>   | 708<br>108   | <u> </u>  | 708          | 907          | T38          | L07          | 107          | 90 <u>1</u>  | H07              | S03         | H07              | H05              | HOC              | HOG              | HOG              | S03              | 107              | 1.07             |
|              |                  |                  |          | •                |                  | •                |                  |                  |             |              |              | ,            |           |              |              | •            |              |              |              |                  |             |                  |                  |                  |                  |                  |                  |                  |                  |
|              |                  |                  |          |                  |                  |                  |                  |                  | •           |              |              |              |           |              |              |              |              |              |              |                  |             |                  |                  |                  |                  |                  |                  | •                |                  |
|              |                  |                  |          | •                |                  |                  |                  |                  |             |              |              |              |           |              |              |              | •            |              |              |                  |             |                  |                  |                  |                  |                  |                  |                  |                  |
|              |                  |                  |          |                  |                  |                  |                  |                  |             |              | •            |              |           |              |              | _            |              |              |              |                  |             |                  |                  |                  |                  |                  |                  |                  |                  |
|              |                  |                  | •        |                  |                  |                  |                  |                  |             |              |              |              |           |              |              |              |              | -            |              |                  |             |                  |                  | <del>.</del>     |                  | -                |                  | · · · ·          |                  |
|              |                  |                  |          |                  |                  |                  |                  | <del></del>      |             |              |              |              |           | <del></del>  |              |              |              |              |              |                  |             | ·                | _                |                  |                  | <del>-</del>     |                  | _                |                  |
|              |                  |                  |          |                  |                  |                  |                  |                  |             |              |              |              |           |              |              |              |              |              |              |                  |             |                  |                  |                  |                  |                  |                  |                  |                  |
|              |                  |                  |          | •                |                  |                  |                  |                  |             |              | -            |              |           |              |              | _            |              |              | -            |                  |             |                  |                  |                  |                  |                  |                  |                  |                  |
|              |                  | -1               |          |                  |                  |                  |                  |                  |             |              |              |              |           | <del> </del> |              |              |              |              |              |                  |             |                  |                  |                  |                  |                  |                  |                  |                  |

|                                  |  | Τ                   | ,                 |                   |                   |                            |                     |   |   |   |                     |                     |                      |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |
|----------------------------------|--|---------------------|-------------------|-------------------|-------------------|----------------------------|---------------------|---|---|---|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                                  | •  |                     |                   |                   |                   |                            |                     |   |   |   |                     |                     |                      |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                  |  |                     |                   |                   |                   |                            |                     |   |   |   |                     |                     |                      |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |
|                                  |  |                     |                   |                   |                   |                            |                     |   |   |   |                     |                     |                      |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                  |  |                     |                   |                   |                   |                            |                     |   |   |   |                     |                     |                      |                      |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| S0434: 1, L0591: 1 and S0026: 1. | H0659: 1 and L0758:  | AR096: 7, AR104: 7, |                   | 4, AR053:         |                   | R039: 0                    | S0358: 6, L0659: 6, | Leu-136 to Leu-150, L0805: 3, L0655: 3, | Glu-165 to Leu-170, L0665: 3, H0670: 3, | Val-183 to Asp-191. L0755: 3, S0026: 3, | S0360: 2, S0003: 2, | .0649: 2, L0774: 2, | .0776: 2, L.0666: 2, | ,0663: 2, L.0777: 2, | .0758: 2, H0624: 1, | H0170: 1, T0002: 1, | H0656: 1, H0638: 1, | H0637: 1, L0717: 1, | S0278: 1, S0222: 1, | H0497: 1, H0642: 1, | H0574: 1, H0632: 1, | H0486: 1, H0156: 1, | ,0021: 1, H0036: 1, | H0251: 1, H0046: 1, | .0157: 1, L0471: 1, | H0083: 1, S0214: 1, |
| S S                              | H 1.   | A                   |                   |                   | Αŀ                | 38, AF                     | 22, S               | 50, 1.0                                 | 70 <u>,</u> 10                          | 91. <u>L</u> 0                          | <u>8</u>            | 3                   | <u> </u>             | 3                    | <u>3</u>            | Ħ                   | Ħ                   | Ħ                   | <u>8</u>            | H                   | 芦                   | Ħ                   | 3                   | Ħ                   | <u>3</u>            | 王                   |
|                                  | Arg-1 to Gly-14,<br>Glu-24 to Ile-34,<br>Glu-40 to Phe-52. | Glu-16 to Ser-23,   | Tyr-32 to Ala-44, | Leu-56 to Ala-70, | Ser-85 to Thr-91, | Glu-102 to Lys-108, AR039: | Glu-116 to Leu-122, | Leu-136 to Leu-1:                       | Glu-165 to Leu-1'                       | Val-183 to Asp-19                       | •                   |                     | ,                    |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ;                   |
|                                  | 3145   | 3146                |                   |                   |                   |                            |                     |   |   |   |                     |                     |                      |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                  | 206 - 361  | 945 - 1562          | •                 |                   |                   |                            |                     |   |   |   |                     |                     |                      |                      |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |
|                                  | 970  | 971                 |                   |                   |                   |                            |                     |   |   |   |                     |                     |                      | •                    | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                  | 1062686  | 1062718             |                   |                   | •                 |                            |                     |   |   |   |                     |                     |                      |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   | ,                   |
|                                  | HPCTC48  | HKBAK29             |                   |                   |                   |                            |                     |   |   |   |                     |                     |                      |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ****                |                     |

|                     | -,   |                     |                     |                     | -                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| H0039: 1, H0644: 1, | H0165: 1, H06/4: 1,<br>H0090: 1, H0040: 1, | H0412: 1, H0413: 1, | H0625: 1, H0529: 1, | L0646: 1, L0768: 1, | L0766: 1, L0803: 1, | L0775: 1, L0784: 1, | L0634: 1, L0783: 1, | H0520: 1, S0126: 1, | H0689: 1, H0683: 1, | H0666: 1, H0648: 1, | H0539: 1, H0521: 1, | S0044: 1, S3014: 1, | L0744: 1, L0756: 1, | L0752: 1, L0757: 1, | L0592: 1, L0485: 1, | H0423: 1, H0422: 1 and | H0506: 1. | L0599: 2, H0271: 1, | H0031: 1 and H0623: 1.                 | L0747: 4, H0620: 3, | S0051: 3, H0424: 3, | L0749: 3, L0756: 3, | L0755: 3, H0295: 2, | S0300: 2, H0333: 2, | H0024: 2, H0100: 2, | L0794: 2, L0774: 2, | H0672: 2, L0744: 2, |
|                     | •  |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        | •         | Ser-12 to Trp-23,   | Tyr-25 to Tyr-32,<br>Pro-34 to Phe-41. |                     |                     |                     |                     |                     |                     |                     | -                   |
|                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 3147                |  | 3148                |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                        |           | 329 - 682           |  | 3-1910              |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 972                 |  | 973                 |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1062743             |  | 1062785             |                     |                     |                     |                     |                     |                     |                     |
|                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HPMCX26             |  | HFKHF51             |                     | ٠                   |                     |                     |                     |                     |                     |

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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           |                     |                     |                     |                    |                      |   |                     |                     |                     |                     |                     |                     |
| L0754: 2, L0777: 2, | L0731: 2, L0759: 2, | S0412: 2, S0420: 1, | S0222: 1, S0005: 1, | S0049: 1, H0320: 1, | S0250: 1, H0213: 1, | H0417: 1, H0068: 1, | L0564: 1, H0494: 1, | L0771: 1, L0803: 1, | L0775: 1, L0382: 1, | L0809: 1, L0367: 1, | L0787: 1, L0791: 1, | L0793: 1, S0126: 1, | H0690: 1, S0380: 1, | L0612: 1, S3014: 1, | L0779: 1, L0757: 1, | S0260: 1, L0592: 1 and | L0603: 1. | AR096: 1, AR055: 1, | AR089: 1, AR061: 0, | AR060: 0, AR033: 0, | AR052: 0, AR104: 0 | L0766: 11, H0622: 5, | H0716: 2, S0420: 2,                     | L0769: 2, L0803: 2, | L0779: 2, H0656: 1, | H0484: 1, S0418: 1, | S0444: 1, H0580: 1, | Н0730: 1, Н0619: 1, | H0411: 1, H0592: 1, |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | Lys-16 to Gly-23,   | Glu-33 to Val-43,   | Ser-55 to Ala-67,   | Gln-82 to Pro-97,  | Thr-108 to Gln-124,  | Pro-151 to Glu-157, H0716: 2, S0420: 2, | Leu-184 to Cys-194, |                     | Pro-227 to Asp-243, | Lys-304 to Ser-324. | _                   |                     |
|                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 3149                |                     |                     |                    |                      |   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     | <del></del>         |                     |                     |                     |                        |           | 71 - 1090           |                     |                     |                    |                      |   |                     |                     | •                   |                     | ٠                   |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 974                 |                     |                     |                    |                      |   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 1062795             |                     |                     |                    |                      |   |                     |                     |                     | ,                   |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HUCPE28             |                     | ,                   |                    |                      |   |                     |                     |                     |                     |                     |                     |

| H0427: 1, H0581: 1,<br>H0052: 1, H0494: 1,<br>L0774: 1, L0775: 1,<br>L4501: 1, L0665: 1,<br>S0374: 1, H0539: 1,<br>S0404: 1, L0743: 1,<br>L0745: 1, L0749: 1,<br>L0777: 1, L0752: 1,<br>S0436: 1 and L0097: 1. | L0361: 2, H0170: 1,<br>H0341: 1, H0663: 1,<br>S0358: 1, S0045: 1,<br>H0392: 1, H0586: 1,<br>H0488: 1, H0509: 1,<br>L0763: 1, L0665: 1,<br>S0044: 1, L0779: 1 and<br>L0593: 1.   |                      |                                      |                  |                  | H0713: 5, H0684: 2, |
|--|---|----------------------|--------------------------------------|------------------|------------------|---------------------|
|  | Phe-12 to Thr-19, L0361: Thr-26 to Cys-36, H0341: Thr-45 to Lys-50, S0358: 1 Thr-54 to Gly-65, H0392: His-81 to Lys-88, H0488: Thr-110 to Lys-116, L0763: 1 Phe-124 to Thr-131, S0044: 1 Thr-138 to Lys-144, L0593: 1 Ser-156 to Thr-162, His-165 to Lys-172, Asn-181 to Thr-187, Thr-194 to Lys-200, Thr-222 to Glu-230. | Arg-1 to Cys-10.     |                                      |                  |                  |                     |
| ·  | 3150  | 3151                 | 3153                                 | 3155             | 3156             | 3157                |
|  | 1 - 708   | 91 - 303             | 2-124                                | 52 - 342         | 2 - 199          | 2 - 478             |
|  | 975   | 976                  | 978                                  | 086              | 981              | 982                 |
|  |   | H6EDQ51R<br>HA5AU29R | HACBX26 HACBX26R<br>HACMD23 HACMD23R | HACMF32 HACMF32R | HACMH54 HACMH54R | HACMH72 HACMH72R    |
|  | <b>НР</b> WАН30   | H6EDQ51<br>HA5AU29   | HACMD23                              | HACMF32          | HACMH54          | HACMH72             |

|                        |           |                     |                        | •                |                    |                       |                     |                     |                     |                     | *                   |                     |                     |                     |                     |                     |                     |                     |                     | <u>.                                      </u> |                     |                     |                     |                     |                     |                     |                     | _                   |                     |
|------------------------|-----------|---------------------|------------------------|------------------|--------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                        |           |                     |                        |                  |                    |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |  | -                   |                     |                     |                     |                     |                     | <u> </u>            |                     |                     |
| H0685: 1, H0689: 1 and | H0683: 1. | H0685: 2, S0422: 1, | L0766: 1 and L0526: 1. |                  |                    | L0747: 25, S0358: 11, | .0755: 9, L0740: 7, | .0758: 7, L0775: 6, | H0659: 6, L0742: 6, | H0545: 5, S0406: 5, | .0750: 5, LQ756: 5, | .0757: 5, L0362: 5, | S0026: 5, H0580: 4, | S0007: 4, H0413: 4, | H0494: 4, S0440: 4, | .0520: 4, L0769: 4, | .0731: 4, H0543: 4, | H0295: 3, H0341: 3, | S0444: 3, H0581: 3, | H0529: 3, L0770: 3,                            | .0766: 3, L0382: 3, | H0436: 3, L0744: 3, | _0361: 3, H0686: 2, | S0134: 2, S0218: 2, | H0419: 2, H0484: 2, | 80442: 2, 80360: 2, | S0045: 2, H0486: 2, | H0427: 2, L0021: 2, | H0594: 2, T0023: 2, |
|                        | 1         |                     |                        |                  | Ser-9 to Phe-14.   | Glu-113 to Gly-118.   | <u> </u>            | <u> </u>            |                     |                     |                     |                     | <u> </u>            | <u> </u>            |                     |                     | 1                   |                     | <u>.</u>            |  | 1                   | 11                  |                     |                     |                     |                     |                     | <del></del>         | Ī                   |
|                        |           | 3158                |                        | 3159             | 3160               | 3161                  |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                        |           | 1 - 84              |                        | 221 - 451        | 3 - 116            | 3 - 419               |                     |                     |                     |                     |                     |                     |                     |                     | v                   |                     |                     |                     |                     |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| -                      |           | 983                 |                        | 984              | 985                | 986                   |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |  |                     | _                   | -                   |                     |                     |                     |                     | •                   |                     |
|                        |           | HACMM26 HACMM26R    |                        | HACMM56 HACMM56R | HACMS55   HACMS55R | HACMX77R              |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |  |                     |                     |                     |                     |                     | •                   |                     | •                   |                     |
|                        |           | HACMM26             |                        | HACMM56          | HACMS55            | HACMX77               |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠  |                     |                     |                     |                     | •                   |                     |                     |                     |                     |

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|                     |                     |                      |             |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     |                  |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    |                  |
|                     |                     |                      |             |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  | ٠                  |                     |                  |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    | į                |
| _                   |                     |                      |             |                     | _                   |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     |                  |                  |                  |                  |                  |            |                 | <u>-</u>           |                  |                  |                  |                  |                    | _                |
| 2,                  | ۷,                  | 2,                   | ٦,          | ຜ໌                  | ર્ય                 | 4,                  | 2,                  | ر.                  | 2,                   | 2,                   | 2,                  | ر                  | 1,               | 7                  | 1,                  | l,               | 1,               | <del>,</del>     | <del></del>      | l,               | <b>.</b> — | 1,              | <b>1</b> ,         | 1,               | 1,               | 1,               | 1,               | <del>-</del> -     | 1,               |
| H0063: 2, H0551: 2, | H0560: 2, L0761: 2, | .0773: 2, L.0648: 2, | L0768: 2,   | .0653: 2, L0654: 2, | J0776: 2, L0526: 2, | 30374: 2, H0689: 2, | H0670: 2, S0028: 2, | 30206: 2, L0748: 2, | .0439: 2, L.0751: 2, | .0754: 2, L.0749: 2, | .0752: 2, L0759: 2, | H0445: 2, L0595: 2 | H0171: 1, H0265: | H0294: 1, H0294: 1 | H0657: 1, S0116: 1, | S0212: 1, S0001: | H0192: 1, S0376: | 408:             | H0431: 1, H0370: | H0392: 1, H0600: | H0587:     | H043: 1, H0331: | H0632: 1, T0060: 1 | T0082: 1, H0318: | 30049: 1, H0251: | H0309: 1, H0054: | H0327: 1, H0530: | H0544: 1, H0123: 1 | 471:             |
| , H0                | ., LO               | ŭ                    | Lo          | ŭ                   | , LÖ                | , HO                | SO(                 | , 1.07              | , 10                 | , 10                 | , LO                | , LO               | , H0             | H.                 | , S0                | , 800            | , SO.            | H0676: 1, S0408: | , H0             | , H0             | , H0       | , H0            | ., To              | , HO             | , HO             | , H0             | I, H0            | l, H0              | H0050: 1, L0471: |
| 63: 2               | 60:2                | 73:2                 | .0521: 2, I | 53:2                | 76:2                | 74: 2               | 70:2                | 06:2                | 39:2                 | 54:2                 | 52: 2               | 45: 2              | 71: 1            | 85: 1              | 57: 1               | 12: 1            | 92: 1            | 76: 1            | 31:1             | 92: 1            | H0586: 1,  | 43: 1           | 32: 1              | 82: 1            | 49: 1            | 99: 1            | 27: 1            | 4.                 | 50: 1            |
| 00H                 | H05                 | 107                  | 105         | 706                 | <u>1</u> 04         | S03,                | 90H                 | <u>S02</u>          | <u>1</u>             | 101                  | 107                 | H04                | H01              | 90H                | 90H                 | S02              | H01              | H06              | H04              | H03              | H05        | H06             | 90H                | <u>100</u>       | <u>80</u>        | H03              | H03              | H05                | <u> </u>         |
|                     |                     |                      |             |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     |                  |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    |                  |
|                     |                     |                      |             |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     |                  |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    |                  |
|                     |                     |                      |             |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     |                  |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    | ļ                |
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| -                   |                     | ·                    |             |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  | -                  |                     |                  |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    |                  |
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|                     |                     |                      |             |                     | <del></del>         |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     | _                |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    |                  |
|                     |                     |                      |             |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     |                  |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    |                  |
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|                     |                     |                      |             |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     |                  |                  | -                |                  |                  |            |                 |                    |                  | ,                | •                |                  |                    |                  |
|                     |                     |                      |             |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     |                  |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    |                  |
| _                   |                     | _                    | -           | <u>.</u>            |                     |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     |                  |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    |                  |
|                     |                     |                      |             |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     |                  |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    |                  |
|                     |                     |                      |             |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     |                  |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    |                  |
| L                   |                     |                      |             |                     |                     |                     |                     |                     |                      |                      |                     |                    |                  |                    |                     |                  |                  |                  |                  |                  |            |                 |                    |                  |                  |                  |                  |                    |                  |

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|------------------|------------------|------------------|------------------|------------------|------------------|-----------|------------------|------------|-----------|------------------|-------------|-------------|-----------|------------------|----------|----------|----------|------------|----------|----------|------------------|------------------|-----------|------------------|------------------|------------------|------------------|------------------|-----------------|
|                  |                  |                  |                  |                  |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
|                  |                  |                  | ٠                |                  |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
|                  |                  |                  |                  |                  |                  |           | _                |            |           | •                |             |             |           |                  |          |          |          |            |          | -        |                  |                  |           |                  | -                | -                |                  | <u>·</u>         |                 |
|                  |                  |                  |                  |                  |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          | •          |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
|                  |                  |                  |                  |                  |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  | •                |                 |
| 1,               | <del>,</del>     |                  |                  | Η,               |                  | 1,        |                  |            | <u>.</u>  |                  | T,          |             |           |                  |          |          |          | <u>_</u> , |          |          | T,               | 1,               | ľ,        | <b>_</b> ,       |                  | 1,               | 1,               | ·<br>            | l,              |
| 620:             | 373:             | 510:             | 022:             | 169:             | 036:             | H0412:    | 475: ]           | , H0509: 1 | 647:      | 210: 1           | L0506:      | L0646: ]    |           | 522:             | .0375:   | L0661:   | L0657: ] | L0384:     | L0519:   | T0666:   | 068:             | 519:             | 682:      | 378:             | 525:             | 522:             | 555:             | 478:             | 012:            |
| 1, H0            | 1, H0            | 1, HO            | 1, SO            | 1, H0            | 1, S0            | 1, H0     | 1, 10            |            | 1, HO     | 1, S02           | 1, 10       | 1, 10       | _         | 1, 1.00          | l, I     |          | •        | •          |          | 1, LO    | 1, TO            | 1, H0            | 1, H0682: | 1, SO            | 1, HO            | 1, H0            | 1, H0            | 1, H0            | 1, 83           |
| H0012: 1, H0620: | H0014: 1, H0373: | H0051: 1, H0510: | H0266: 1, S0022: | H0428: 1, H0169: | H0674: 1, S0036: | H0380: 1, | F0042: 1, L0475: | 30438: 1   | S0150: 1, | S0344: 1, S0210: | H0026: 1, I | .0630: 1, I | .0764: 1, | .0767: 1, L0522: | 0774: ]  | .0655: 1 | .0807: 1 | .0659: 1   | .0383: 1 | .0532: 1 | H0144: 1, T0068: | H0547: 1, H0519: | S0126: 1  | H0658: 1, S0378: | S0380: 1, H0525: | H0521: 1, H0522: | H0696: 1, H0555: | S0392: 1, H0478: | H0631: 1, S3012 |
| 0H               | 贸                | H                | Ħ                | E                | 丑                | 呈         | <u>2</u>         | 8          | 80        | <u>80</u>        | H           | <u>음</u>    | <u> </u>  | <u> </u>         | <u> </u> | <u> </u> | <u> </u> | <u> </u>   | <u>음</u> | <u> </u> | H                | Ħ                | <u>8</u>  | H                | <u>8</u>         | Œ                | H                | <u>S</u>         | $\Xi$           |
|                  |                  |                  |                  | •                |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          |            | -        |          |                  |                  |           |                  |                  | •                |                  |                  |                 |
|                  |                  |                  |                  |                  |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
|                  |                  |                  |                  |                  |                  |           |                  |            |           |                  |             | ,           |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
|                  |                  |                  |                  |                  |                  |           |                  |            | ·<br>     |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
|                  |                  |                  |                  |                  |                  |           |                  |            |           |                  |             | •           |           |                  | •        |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
|                  |                  |                  |                  |                  |                  |           |                  |            |           |                  |             | •           |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
| ·<br>            |                  |                  |                  |                  |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
| ┝                |                  |                  |                  |                  |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
| <u></u>          |                  |                  |                  | <u></u>          |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
| ŀ                |                  |                  |                  |                  |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
|                  |                  |                  |                  |                  |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
|                  |                  |                  |                  | _                | , <del></del>    |           |                  |            |           |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
|                  |                  |                  |                  |                  |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
|                  |                  |                  |                  |                  |                  |           |                  |            |           |                  |             |             |           |                  |          |          |          |            |          |          |                  |                  |           |                  |                  |                  |                  |                  |                 |
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|   |   |  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| L0779: 1, L0753: 1,<br>S0434: 1, L0588: 1,<br>L0485: 1, H0668: 1,<br>H0653: 1, H0136: 1,<br>S0196: 1, H0542: 1,<br>H0422: 1 and H0008: 1. |   | H0617: 9, H0618: 4,<br>H0253: 4 H0545: 4 | L0774: 4, L0439: 4, | L0750: 4, L0766: 3, | L0803: 3, L0806: 3, | L0748: 3, L0747: 3, | L0777: 3, L0752: 3, | L0758: 3, H0685: 2, | H0333: 2, H0559: 2, | H0100: 2, L0644: 2, | L0542: 2, L0565: 2, | L0438: 2, L0587: 2, | S0040: 1, S0114: 1, | H0589: 1, S0418: 1, | S0420: 1, S0356: 1, | S0376: 1, H0580: 1, | H0351: 1, H0411: 1, | S0278: 1, H0549: 1, | S0222: 1, H0431: 1, | H0438: 1, T0109: 1, | H0427: 1, S0280: 1, |
| 7. 1. 4. 1. 4. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.   | Inr-11 to Gry-10,<br>Ser-49 to Ser-55,<br>Ile-64 to Gly-69. | Gln-1 to Lys-6.                          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| , 2,5   | 3162  | 3163                                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 2 245   | 3 - 243   | 2 - 274                                  |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |
| 087   | 98/   | 886                                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| TACM745B  | HACMZ43K  | HACND54 HACND54R                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                     |                     |                     |                     |                     |                     |
| HA CM745  | HACIMIZ45   | HACND54                                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | • • •               |                     |                     | -                   |                     |                     |                     |                     |

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|                  |                  |                  |                  |           |             |          |                  |          |              |          | ,                |            |          |           |           |           |           |          |          |               |                  |                  |                  |                    |                  |                     |                     |                     |                    |
|                  |                  |                  |                  |           |             |          |                  |          |              |          |                  |            |          |           |           |           |           |          |          |               |                  |                  |                  | •                  |                  |                     |                     |                     |                    |
| ,                |                  |                  |                  |           |             | •        |                  |          |              |          |                  | •          |          | _         |           | •         | •         | •        | •        | •             |                  |                  | •                |                    |                  | ·                   | •                   | 2: 1.               | 3,                 |
| 599: 1           | 052:             | )046: ]          | 3773:            | 1, H0071: | 1, H0266: 1 | T0006: 1 | )213:            | H0124:   | 1, H0264:    | , H0059: | 3132:            | , S0208: 1 | L0770: 1 | L0646: 1  | L0643: 1  | L0768: 1  | L0629: 1  | L0809: 1 | L0790: 1 | L0665: 1      | .6150            | :0990            | 330: 1           | 146: 1             | 576: 1           | H0478: 1, L0749: 1, | .0780: 1, L0755: 1, | H035                | H0457: 4, S0474: 3 |
| ,0021: 1, H0599: | : 1, H(          | H0544: 1, H0046: | H0024: 1, H0373: | : 1, H(   | : 1, HC     | •        | H0604: 1, H0213: | -        | : 1, H(      | _        | H0561: 1, H0132: |            | Γ,       | · •       |           | : 1, L0   | _         | _        |          |               | HO547: 1, H0519: | H0658: 1, H0660: | H0651: 1, S0330: | : 1, S0            | S0406: 1, H0576: | 1,10                | 1,10                | : 1 and             | 7:4,5              |
| 12007            | H0318: 1, H0052: | H0544            | H0024            | H0051: 1  | T0010:      | H0615: 1 | H0604            | H0553: 1 | H0087:       | H0412:   | H0561            | H0647: 1   | L0598: 1 | L0769: 1, | L0642: 1, | L0764: 1, | L0375: 1, | L0783: 1 | L0789: 1 | L0666: 1,     | H0547            | H0658            | H0651            | S0380: 1, S0146: 1 | S0406            | H0478               | L0780               | S0192: 1 and H0352: | H045               |
|                  |                  |                  |                  |           |             |          |                  | •        | <del>.</del> |          | <u></u>          |            |          |           |           |           |           |          |          | <u>\</u>      |                  |                  |                  |                    |                  |                     | •                   |                     |                    |
|                  |                  |                  |                  |           |             |          |                  |          |              |          |                  |            |          |           |           |           |           |          |          |               |                  |                  |                  |                    |                  |                     |                     |                     |                    |
|                  |                  |                  |                  | •         |             |          |                  | •        |              |          |                  |            |          |           |           |           |           |          |          |               |                  | -90              |                  |                    |                  |                     |                     |                     |                    |
| -                |                  |                  |                  |           |             |          |                  |          |              |          |                  |            | <u> </u> |           |           |           |           |          |          | <del></del>   |                  |                  |                  |                    |                  |                     |                     | -                   | 4                  |
|                  |                  |                  |                  |           |             |          |                  |          |              |          |                  |            |          |           |           |           |           |          |          |               |                  |                  | ·····            |                    |                  |                     |                     |                     | 3164               |
|                  |                  |                  |                  |           |             |          |                  |          |              |          |                  |            |          |           |           |           |           |          |          |               |                  | ٠                |                  |                    |                  |                     |                     |                     | 166 - 318          |
| _                |                  | ٠                |                  |           |             |          |                  |          |              |          |                  |            |          |           |           |           |           |          |          |               |                  |                  |                  |                    |                  |                     | -                   |                     | ├─┤                |
|                  |                  |                  |                  |           |             |          |                  |          |              |          |                  |            |          |           |           |           |           |          |          |               |                  |                  |                  |                    |                  |                     |                     |                     | 686                |
|                  |                  |                  |                  |           |             |          |                  |          |              |          |                  |            |          |           |           |           |           |          |          |               |                  |                  |                  |                    |                  |                     |                     |                     | D56R               |
|                  |                  |                  |                  |           |             |          |                  |          |              |          |                  |            |          |           |           | •         |           |          |          |               |                  |                  |                  |                    |                  |                     |                     |                     | HACND56 HACND56R   |
| -                |                  |                  | _                |           |             | -        | •                |          |              |          |                  |            |          | -         |           |           |           |          |          | <del></del> - |                  |                  |                  |                    | -                |                     | -                   |                     | 356 1              |
|                  | ٠                |                  |                  |           |             |          |                  |          |              |          |                  |            |          |           |           |           |           |          |          |               | -                |                  |                  |                    |                  |                     |                     |                     | ACNI               |
|                  |                  |                  |                  |           |             |          |                  |          |              |          |                  |            |          | _         |           |           |           |          |          |               |                  |                  |                  |                    |                  |                     |                     |                     | 田                  |

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| H0616: 3, L0665: 3, | L0794: 2, L0659: 2, | L0779: 2, H0423: 2, | H0171: 1, H0685: 1, | H0675: 1, S0408: 1, | H0013: 1, L0105: 1, | H0581: 1, T0110: 1, | S0214: 1, H0622: 1, | H0561: 1, S0002: 1, | H0529: 1, L0762: 1, | L0667: 1, L0766: 1, | L0805: 1, L0655: 1, | L0658: 1, L0790: 1, | H0702: 1, H0648: 1, | H0521: 1, L0748: 1, | L0777: 1, L0758: 1 and | L0366: 1. |           |                   |                   |                   | AR089: 18, AR060: | 15, AR104: 14, AR096: | 9, AR055: 6, AR061: | 4                  | L0754: 12, L0740: 8, | L0731: 8, S0003: 6, | L0649: 6, H0620: 5, | S0214: 5, L0766: 5, |
|                     |                     |                     |                     | ,                   |                     |                     |                     | ,                   | •                   |                     |                     |                     |                     |                     |                        |           |           | Asp-30 to Thr-37, | Lys-81 to Glu-87. | Ile-13 to Gly-18. | Val-23 to Lys-30, | Tyr-40 to Asn-50,     | Lys-63 to Lys-68,   | Leu-92 to Asn-102. |                      |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 3165      | 3166              |                   | 3167              | 3168              |                       |                     |                    | 3169                 |                     |                     | .                   |
|                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 229 - 426 | 3 - 542           |                   | 2 - 91            | 39 - 200          |                       |                     |                    | 239 - 370            |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 066       | 166               |                   | 766               | 666               |                       |                     |                    | 994                  |                     |                     |                     |
|                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     | ,                   |                     |                     |                        |           | HACNE40R  | HACNF21R          |                   | HACNF41R          | HACNI47R          |                       |                     |                    | HACNI86R             |                     |                     |                     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HACNE40   | HACNF21           |                   | HACNF41           | HACNI47           |                       |                     |                    | HACNI86              |                     |                     |                     |

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|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     | ٠                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| J0803: 5, L0805: 5, | H0545: 4, L0748: 4,    | H0341: 3, S0444: 3, | H0486: 3, H0012: 3, | H0644: 3, H0551: 3, | J0662: 3, L0653: 3, | .0663: 3, S0126: 3, | S0206: 3, L0779: 3, | J0757: 3, L0758: 3, | H0294: 2, S0212: 2, | S0376: 2, S0360: 2, | S0410: 2, H0580: 2, | 10632: 2, H0156: 2, | J0105: 2, L0471: 2, | H0494: 2, H0647: 2, | S0002: 2, L0646: 2, | .0771: 2, L0794: 2, | .0776: 2, L0807: 2, | ,0438: 2, H0547: 2, | H0672: 2, S0330: 2, | H0626: 2, S3014: 2, | L0750: 2, L0752: 2, | L0759: 2, S0026: 2, | H0624: 1, H0686: 1, | H0685: 1, H0713: 1, | H0717: 1, S0116: 1, | H0664: 1, H0638: 1, | S0418: 1, S0420: 1, | L0005: 1, S0356: 1, | S0358: 1, S0476: 1, |
|                     | <u>, <del></del> -</u> |                     | <u>, 114</u>        | <u> </u>            | <b>.</b>            | 1                   | <u> </u>            | <u>F</u>            | <u> </u>            | <u> </u>            | <u> </u>            | <u> </u>            | <b>,</b>            |                     | <u> </u>            |                     |                     | .}—-                | <b>. 14</b> .       |                     | <del>,</del>        |                     | <u> </u>            |                     |                     |                     | <u> </u>            |                     | 3                   |
|                     |                        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     | · ·                 |                     |                     |                     |                     |                     |                     |                     |
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|                     |                        |                     |                     | -                   |                     |                     |                     |                     |                     | ·                   | <del>-</del>        |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ~                   |                     |                     | -                   |                     |
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|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           | •         |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           | •            |           |           |             |                  |                     | ł                |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              | •         |           |             |                  |                     |                  |
| <del>_</del>     | 1,               | <b>–</b> ,       | <del>_</del>     | <del>_</del>     | <del>,</del>     | 1,               | ۲,                 | L,       | 1,               | <del></del>      | ÷                | L,        | 1,               | Ļ,        | Ļ                | L,           | l,                 | <del></del>      | 1,               | L,        | Ę         | 1,        | Ę            | Ļ         | Ę         | l,          | Ť                | j.                  | L,               |
| S0222: 1, H0586: | H0574: 1, T0039: | H0013: 1, S0280: | .0021: 1, H0575: | S0346: 1, H0581: | H0374: 1, H0309: | H0546: 1, H0024: | H0373: 1, H0051: 1 | 90:      | H0179: 1, S0318: | S0316: 1, H0687: | H0288: 1, H0031: | 1, H0628: | H0032: 1, S0036: | l, H0591: | H0038: 1, H0616: | , H0413:     | H0561: 1, H0366: 1 | S0438: 1, S0440: | H0641: 1, S0144: | l, L0762: | L0641:    | L0381:    | L0375:       | L0809:    | L0368:    | L0664:      | H0144: 1, H0701: | H0520: 1, H0659: 1, | H0670: 1, H0651: |
| H05              | 100<br>1         | S02              | H05              | H05              | H03              | HO               | HO                 | HOX      | <b>S03</b>       | H06              | HOOH             | H         | 200              | H05       | ĔΗ               | HQ           | H03                | <b>S</b> 02      | <b>S</b> 01      | 5         | 28        | 23        | 23           | 8         | 123       | 26          | HO               | HOH                 | Ĕ<br>H           |
| 1, ]             | Ξ,               | <u>.</u> ;       |                  | 1,               | <u>-</u> i       | <u>-</u>         | <del>-</del>       | 1;       | <del>-</del> :   | Ξ,               | <u>-</u>         | Ξ,        |                  |           | <u>.</u> ;       | Ξ:           | : <b>1</b> ,       | <u></u>          | <del>-</del> :   |           | <u></u>   |           | <del>-</del> | ÷.        | Τ,        | 1,          | <del></del>      | . <del>.</del> .    | -1               |
| 22:              | 574              | 013              | 221:             | <del>2</del> 6   | 374              | 346              | 373                | 356      | 179              | 316:             | 288              | .0142: 1  | 032              | H0090: 1  | 038              | H0063: 1     | 561                | 138:             | 4                | H0529: 1  | .0769: 1, | .0773: 1, | .0775: 1, ]  | 0606: 1,  | .0529: 1, | .0666: 1, 1 | 4                | 520                 | 8                |
| 20S              | <u>E</u>         | <u>Ē</u>         | <u> </u>         | 80               | E                | 丑                | <u>E</u>           | <u>H</u> | 丑                | <u>S</u>         | <u>H</u>         | <u> </u>  | 豆                | <u>E</u>  | 유                | $\mathbb{H}$ | 9                  | <u>8</u>         | Ē                | H         | <u>ප</u>  | <u>ප</u>  | <u>ප</u>     | <u>ទ័</u> | <u>S</u>  | <u>Š</u>    | 丑                | 9                   | 외                |
|                  |                  |                  |                  | •                |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           | •                |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     | ١                |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  | •                |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     | -                |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           | ·           |                  |                     | _                |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     | ľ                |
|                  |                  |                  |                  |                  |                  |                  |                    | ·        |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           | _           |                  |                     | Î                |
|                  |                  |                  |                  | •                |                  |                  |                    |          |                  |                  |                  | -         |                  |           |                  |              |                    |                  | •                |           |           |           |              |           |           |             |                  | ,                   |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              | -         |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  | -                |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    | -                |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              | •         |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           | -                |              |                    |                  |                  |           |           |           |              |           |           |             |                  | <del></del>         | ᅱ                |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  | •                   |                  |
|                  |                  |                  |                  |                  |                  |                  |                    |          |                  |                  |                  |           |                  |           |                  |              |                    |                  |                  |           |           |           |              |           |           |             |                  |                     |                  |
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|   |                   |          |                  |                                      |                   |                   | -                  |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |
| ·   |                   |          |                  |                                      |                   |                   |                    |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |
| H0539: 1, H0710: 1,<br>S0152: 1, H0522: 1,<br>H0696: 1, S0044: 1,<br>S0406: 1, H0478: 1,<br>L0756: 1, L0753: 1,<br>S0031: 1, H0595: 1,<br>S0434: 1, L0592: 1,<br>S0011: 1, H0653: 1,<br>S0192: 1, S0242: 1,<br>H0542: 1, H0543: 1 and |                   |          |                  |                                      |                   |                   |                    | L0759: 8, S0010: 7, | S0007: 5. L0809: 4. | L0439: 4, H0013: 3, | L0768: 3, L0753: 3, | H0686: 2, S0134: 2, | S0222: 2, H0052: 2, | H0024: 2, L0769: 2, | L0638: 2, L0521: 2, | L0794: 2, L0438: 2, | L0589: 2, L0608: 2, |
|   | Asn-14 to Thr-26. |          |                  | Leu-3 to Met-9,<br>Gln-24 to Thr-32. | Ser-25 to Cys-36, | Gln-39 to Asp-56. | Asn-49 to Asp-54.  |                     | ٠.                  |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 3170              | 3171     | 3172             | 3173                                 | 3174              | 2125              | 3175               | 3176                |                     |                     | `                   |                     |                     |                     |                     |                     |                     |
|   | 181 - 342         | 2 - 304  | 1 - 501          | 1-96                                 | 2 - 364           | 770 07            | 40 - 246           | 61 - 222            |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|   | 995               | 966      | 166              | 866                                  | 666               | 1000              | 1000               | 1001                |                     |                     |                     |                     | •                   |                     |                     |                     |                     |
|   | HADDD29 HADDD29R  | HADET44R | HAHGU75 HAHGU75R | HAHHD12 HAHHD12R                     | HALSG11R          | TI A STORY OF THE | HANGA96   HANGA96K | HAOSA43 HAOSA43R    | ,                   | •                   |                     |                     |                     |                     |                     |                     |                     |
|   | HADDD29           | HADET44  | HAHGU75          | HAHHD12                              | HALSG11           | 701014111         | HANGA96            | HAOSA43             |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |

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|--|-------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |                   |                     |                     |                     | -                   |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| H0543: 2, H0341: 1,<br>H0441: 1, H0586: 1,<br>S0346: 1, S0049: 1,<br>H0569: 1, H0050: 1,<br>T0010: 1, H0598: 1,<br>H0272: 1, L0666: 1,<br>H0144: 1, H0689: 1,<br>L0747: 1, L0366: 1 and<br>H0423: 1. |                   | L0766: 8, L0803: 7, | L0731: 7, L0758: 5, | S0358: 4, S0360: 4, | L0794: 4, H0547: 4, | S0440: 3, L.0662: 3, | L0659: 3, L0809: 3, | L0666: 3, L0663: 3, | S0374: 3, L0755: 3, | L0596: 3, H0543: 3, | H0583: 2, H0004: 2, | H0622: 2, L0194: 2, | H0038: 2, S0422: 2, | L0771: 2, L0551: 2, | L0774: 2, L0655: 2, | L0526: 2, L0665: 2, | L0750: 2, L0756: 2, | S0436: 2, H0624: 1, | H0170: 1, H0159: 1, | H0686: 1, H0685: 1, |
|  | Val-77 to Val-86. | Pro-69 to Leu-76.   |                     | •                   |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   | * 4                 |                     |                     |                     |
|  | 3177              | 3178                |                     |                     |                     |                      |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     | ٠                   |                     |                     |
|  | 1 - 348           | 55 - 327            |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | 1002              | 1003                |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|  | HAOSB87R          |                     |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| ·  | HAOSB87           | HAOSC40             |                     |                     |                     |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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|                     |                     |                     |                     |                     | •                   | -                   |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     | <del></del>         |                     |                     |                     |                     |                     |                     |                     |                     |                        | ,         |          |          |
| H0650: 1, H0657: 1, | S0116: 1, H0341: 1, | S0442: 1, S0376: 1, | S0444: 1, H0619: 1; | L0717: 1, H0411: 1, | S0222: 1, H0587: 1, | H0497: 1, H0427: 1, | H0042: 1, H0596: 1, | F0110: 1, H0081: 1, | H0050: 1, H0687: 1, | S0003: 1, H0252: 1, | H0213: 1, H0163: 1, | H0591: 1, H0634: 1, | H0616: 1, H0063: 1, | H0413: 1, H0100: 1, | H0529: 1, L0638: 1, | L0637: 1, L0800: 1, | .0764: 1, L0773: 1, | L0521: 1, L0768: 1, | .0784: 1, L0783: 1, | .0788: 1, L0790: 1, | L0664: 1, H0436: 1, | S0392: 1, H0627: 1, | L0748: 1, L0754: 1, | .0749: 1, L0759: 1, | H0445: 1, S0434: 1, | H0423: 1, S0412: 1 and | S0424: 1. |          |          |
| 1                   | S                   | <u>.</u>            | S                   | <u> </u>            | S                   | <u>. 141</u>        | <u> </u>            | Ε.                  | <u>i-1-i</u>        | <u>S</u>            | <u>i-L-i</u>        |                     | <u>11</u>           | <u>i4</u>           | <u>i-Li</u>         |                     |                     | <u>, r-1</u>        |                     |                     | <u> </u>            | S                   |                     | <u> </u>            | <u> </u>            | <u>i-L-i</u>           | S         |          |          |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | _                   |                     |                     |                        |           | 3179     | 3180     |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | 85 - 273 | 1 - 630  |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     | ·                   |                     |                     |                     |                     |                     |                     |                     | •                   |                        |           | 1004     | 1005     |
|                     |                     |                     |                     |                     | •                   |                     |                     | •                   |                     |                     | -                   | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HAOSE70R | HAOSF68R |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                        |           | HAOSE70  | HAOSF68  |

|                                       |                  |                   |                   |                   |                   |                   |                  |                    |          |                       |                       |                       |                       |                       |                       |                     | ·                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
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|                                       |                  |                   |                   |                   |                   |                   | •                |                    |          |                       |                       |                       |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                       |                  |                   |                   |                   |                   |                   |                  |                    |          | H0585: 27, H0556: 17, | L0595: 15, L0591: 13, | L0593: 13, H0046: 12, | H0543: 12, H0521: 11, | L0747: 11, L0596: 11, | H0265: 10, H0040: 10, | H0266: 9, H0038: 9, | H0494: 9, L0588: 9, | H0656: 8, H0581: 8, | H0617: 8, L0664: 8, | H0519: 8, L0601: 8, | L0163: 7, H0083: 7, | H0529: 7, L0665: 7, | L0602: 7, H0657: 6, | H0599: 6, H0618: 6, | H0318: 6, H0551: 6, | L0666: 6, H0547: 6, | H0542: 6, H0141: 5, | H0402: 5, S0358: 5, |
| Arg-5 to Arg-17,<br>Asp-25 to Val-31. | Val-7 to Glu-13, | Thr-20 to Arg-26, | Lys-34 to Phe-40, | Arg-46 to Lys-51. | Lys-27 to Gln-39, | Gln-47 to Thr-52. | Leu-3 to Glu-14, | Ser-95 to Ala-105. |          | Pro-24 to Val-49,     | Tyr-51 to Leu-56.     |                       |                       |                       | ,                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |
| 3181                                  | 3182             | :                 |                   | :                 | 3183              | :                 | 3184             |                    | 3185     | 3186                  |                       |                       |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| 51 - 485                              | 1 - 543          |                   |                   |                   | 2 - 166           |                   | 3 - 353          |                    | 1 - 114  | 1 - 303               |                       |                       |                       |                       | ٠                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |
| 1006                                  | 1007             |                   |                   |                   | 1008              |                   | 1009             |                    | 1010     | 1011                  |                       |                       |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| HAOSG95 HAOSG95R                      | HAOSI79R         |                   |                   |                   | HAOSJ27R          |                   | HAOSJ33R         |                    | HAOSJ73R | HAOSK38R              |                       |                       |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |
| HAOSG95                               | HAOSI79          |                   |                   |                   | HAOSJ27           |                   | HAOSJ33          |                    | HAOSJ73  | HAOSK38               |                       |                       |                       |                       |                       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

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| S0360: 5, S0046: 5, | H0013: 5, H0052: 5, | H0616: 5, H0087: 5, | 10264: 5, T0041: 5, | 70042: 5, S0440: 5, | 0662: 5, L0774: 5, | 0783: 5, L0748: 5, | .0751: 5, L0758: 5, | H0445: 5, L0599: 5, | 608: 5, H0341: 4, | 80420: 4, 80354: 4, | 619: 4, S0222: 4, | H0039: 4, H0213: 4, | H0560: 4, L0521: 4, | 0663: 4, L0565: 4, | ,0750: 4, L0752: 4, | .0362: 4, L0615: 3, | H0686: 3, H0650: 3, | S0356: 3, S0045: 3, | H0438: 3, H0575: 3, | H0253: 3, S0010: 3, | H0251: 3, H0123: 3, | 70023: 3, L0456: 3, | H0124: 3, H0561: 3, | H0509: 3, H0641: 3, | H0646: 3, L0598: 3, | .0646: 3, L0768: 3, | .0655: 3, H0144: 3, | H0689: 3, H0659: 3, | H0666: 3, S0152: 3, |
| 0S                  | HO                  | OH · ·              | HO                  | <u>5</u>            | <u>3</u>           | <u>07</u>          | <u>3</u>            | )HO                 | <u>3</u>          | 08                  | )H                | )H                  | )H                  | 3                  | 3                   | 07                  | )H                  | 0S                  | )H                  | HC                  | )H                  | <u>170</u>          | )H                  | H                   | H                   | <u>3</u>            | 2                   | )H                  | HI                  |
|                     |                     | -                   |                     |                     |                    | •                  |                     |                     |                   |                     |                   |                     |                     |                    |                     |                     |                     |                     |                     | <del></del>         |                     |                     | •                   |                     |                     |                     |                     |                     |                     |
|                     |                     |                     | · ·                 | ·-                  |                    | <del></del> ,      |                     |                     |                   |                     |                   |                     |                     | •                  |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | , · ·               |                     |                     |
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| H0522: 3, S0028: 3, | S0434: 3. H0423: 3. | S0424: 3, H0506: 3, | H0352: 3, H0624: 2, | S0218: 2, H0663: 2, | S0376: 2, H0580: 2, | H0393: 2, L0717: 2, | H0261: 2, H0333: 2, | H0635: 2, S0049: 2, | H0596: 2, T0115: 2, | H0597: 2, H0024: 2, | L0483: 2, T0006: 2, | H0031: 2, H0673: 2, | H0090: 2, H0591: 2, | H0634: 2, H0063: 2, | H0059: 2, S0142: 2, | S0210: 2, L0770: 2, | L0769: 2, L0638: 2, | L0372: 2, L0649: 2, | L0776: 2, L0659: 2, | L0636: 2, L0542: 2, | H0520: 2, H0593: 2, | S0328: 2, H0696: 2, | S0044: 2, H0436: 2, | H0631: 2, S3012: 2, | S3014: 2, S0206: 2, | L0742: 2, L0439: 2, | L0592: 2, L0361: 2, | H0136: 2, H0422: 2, | H0222: 1, H0159: 1, |
|                     |                     |                     |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |                     |
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|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ,                   |                     |                     |                     |
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|                     |                     |                     |                     |                     |                                       |                     |                 |                     |                     |                     |                     |                     | _                   |                  |                     |                 |                     |                     |                     |                 |                     |                     |                     |                     |                  | -                   |                     | <del></del>         |                  |
|                     |                     |                     |                     |                     |                                       |                     |                 |                     |                     |                     |                     |                     |                     |                  |                     |                 |                     |                     |                     |                 |                     |                     |                     | •                   |                  |                     |                     |                     |                  |
| H0685: 1, S0342: 1, | S0134: 1, H0583: 1, | H0483: 1, H0255: 1, | H0661: 1, H0662: 1, | H0305: 1, S0418: 1, | S0444: 1, H0489: 1,                   | H0637: 1, H0151: 1, | 2: 1, H0411: 1, | S0278: 1, H0369: 1, | H0549: 1, H0441: 1, | H0392: 1, H0298: 1, | F0104: 1, H0600: 1, | H0592: 1, H0587: 1, | H0497: 1, H0331: 1, | 74: 1, L0622: 1, | .0623: 1, H0486: 1, | 9: 1, T0040: 1, | T0114: 1, H0244: 1, | H0069: 1, S0280: 1, | H0156: 1, H0004: 1, | 6: 1, T0071: 1, | H0421: 1, H0085: 1, | H0205: 1, H0204: 1, | H0545: 1, L0471: 1, | H0012: 1, H0246: 1, | 10: 1, H0375: 1, | H0179: 1, H0687: 1, | S0314: 1, H0328: 1, | H0615: 1, H0688: 1, | 28: 1, H0622: 1, |
| 390H                | S013                | H048                | )90H                | )EOH                | 8044                                  | 90H                 | S0132: 1        | S027                | 750H                | H03                 | T010                | H05                 | H045                | H0574: 1         | T062                | T0039: 1        | T011                | HOOK                | H01.                | S0346: 1        | H04,                | H02(                | H05                 | H00                 | H05              | H017                | 5031                | 90H                 | H0428:           |
|                     |                     |                     |                     |                     |                                       | -                   |                 |                     |                     |                     |                     |                     |                     |                  |                     |                 |                     |                     |                     |                 |                     |                     |                     | •                   |                  | _                   |                     |                     |                  |
|                     |                     |                     |                     |                     |                                       |                     |                 |                     |                     |                     |                     |                     | ,                   |                  |                     | -               |                     |                     |                     |                 |                     |                     |                     |                     |                  |                     |                     |                     |                  |
|                     |                     |                     |                     |                     |                                       |                     |                 |                     |                     |                     |                     |                     | *******             |                  | · · · · =           |                 |                     |                     |                     |                 |                     | _                   |                     |                     |                  |                     |                     |                     |                  |
|                     |                     |                     |                     |                     | · · · · · · · · · · · · · · · · · · · |                     |                 |                     |                     |                     |                     |                     |                     |                  | ···                 |                 |                     |                     |                     |                 |                     |                     |                     |                     |                  |                     | <u>.</u>            |                     |                  |
|                     |                     | ,                   |                     | •                   |                                       | •                   | <u> </u>        |                     |                     |                     |                     |                     |                     |                  |                     |                 |                     |                     |                     |                 |                     |                     |                     |                     |                  |                     |                     |                     |                  |
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|                  |                  |                  |                  |                  |                  |                  | <u> </u>         |                  |                  |                  |                  | •                |   |                |                  | <del></del>      | <del></del>     |                  |                  |                  |                  |                  |                  | _                |                  |                  |                  |                  |                     |
| 4: 1,            | 3: 1,            | 4: 1,            | : 1,             | 5: 1,            | 8: 1,            | 3: 1,            | ): 1,            | F. 1,            | 2: 1,            | ): 1,            | ‡: 1,            | ): 1,            | l: 1,                                   | 7: 1,          | F: 1,            | 3: 1,            | ): 1,           | 3: 1,            | ): 1,            | 5: 1,            | ): 1,            | ‡: 1,            | 8: 1,            | 2: 1,            | . 1,             | 4: 1,            | 5:1,             | : 1,             | 5: 1,               |
| H0424: 1, H0644: | .0142: 1, H0628: | H0169: 1, H0674: | S0364: 1, L0455: | H0316: 1, H0135: | 70067: 1, H0488: | H0412: 1, H0413: | 30038: 1, H0100: | .0351: 1, L0564: | H0022: 1, S0352: | S0150: 1, H0130: | H0647: 1, S0144: | 30426: 1, L0369: | .0763: 1, L0371:                        | 761: 1, L'0667 | .0627: 1, L0764: | .0773: 1, L0648: | 0767: 1, L0650: | .0775: 1, L0653: | .0382: 1, L0809: | .0793: 1, S0216: | H0697: 1, S0310: | S0126: 1, H0684: | H0435: 1, H0658: | H0660: 1, H0672: | S0378: 1, S0380: | H0518: 1, H0134: | S0406: 1, H0555: | S0037: 1, S0027: | .0754: 1, L.0745: 1 |
| ЮH               | <u> </u>         | OH               | S03              | HO               | <u>T</u>         | HO               | 200              | <u>103</u>       | HO               | SO1              | HO               | 20 <del>5</del>  | 101                                     | <u>101</u>     | <u>707</u>       | <u>01</u>        | LOT<br>LOT      | <u>101</u>       | <u>10</u>        | 107              | )<br>H           | <u>S01</u>       | HO               | ŎH               | S03              | HO               | S02              | 008              | 1.07                |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |                |                  |                  |                 |                  | -                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                     |
|                  | <u>.</u>         |                  |                  |                  |                  |                  |                  | ·                |                  |                  |                  |                  |   |                |                  |                  |                 |                  |                  |                  |                  |                  |                  | <del></del> -    |                  |                  |                  |                  |                     |
|                  |                  |                  |                  | •                |                  | _                |                  | <u></u>          |                  |                  |                  |                  |   |                |                  |                  |                 |                  | ,                |                  |                  |                  |                  | _                |                  |                  |                  |                  |                     |
|                  |                  |                  |                  |                  |                  | _                |                  | _                |                  |                  |                  |                  |   |                |                  |                  |                 |                  |                  |                  |                  |                  |                  | -                |                  |                  | •                |                  |                     |
|                  | · -              |                  | -;               |                  |                  |                  |                  | <del></del>      |                  |                  |                  |                  | • |                | <del></del>      | <del>,,</del>    |                 |                  |                  |                  |                  |                  |                  |                  |                  |                  | •                | -                |                     |
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|                     |                     |                     |                     |                     |                        |           |                      |                     |                     |                     |                     |                     |                     |                     | 3                   |                     | ٠                   |                     | ,                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-----------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| L0786: 1, L0779: 1, | L0757: 1, L0759: 1, | H0444: 1, H0707: 1, | S0436: 1, L0597: 1, | L0594: 1, S0026: 1, | L0697: 1, H0677: 1 and | L0600: 1. | S0418: 10, L0749: 9, | L0809: 7, S0406: 6, | L0766: 5, L0748: 5, | L0740: 5, L0752: 5, | L0731: 5, S0360: 4, | L0509: 4, L0665: 4, | L0754: 4, S0424: 4, | H0638: 3, S0420: 3, | S0410: 3, H0013: 3, | H0318: 3, H0545: 3, | H0050: 3, H0040: 3, | L0664: 3, H0658: 3, | H0521: 3, L0750: 3, | H0556: 2, H0341: 2, | H0580: 2, S0222: 2, | H0333; 2, L0471; 2, | H0620: 2, H0687: 2, | H0553: 2, H0673: 2, | H0674: 2, H0068: 2, | H0551: 2, H0494: 2, | H0560: 2, S0438: 2, | S0440: 2, H0509: 2, | L0769: 2, L0638: 2, |
|                     |                     |                     |                     |                     |                        |           |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     | ,                   |                     |                     | -                   |                     |                     |
|                     |                     |                     |                     |                     |                        |           | 3187                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | 3 - 269              |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | 1012                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | •                   |                     |                     | ٠.                  | •                      |           | HAOSL36R             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | ٠                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |                     |                     |                        |           | HAOSL36              |                     | ,                   |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |

|                 | <del></del>        |                  |                     |                     | -                |                         |                     | •                  | - · · -             |                    |                    |                  |                  | •                |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
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| 2.              | . 2                | .2               | . 2,                | .2,                 | 1: 2,            | 5: 2,                   | .2,                 | . 2,               | .2,                 | . 2,               | .2,                | 5: 1,            | 7: 1,            | 9: 1,            | :1,              | 3: 1,            | : 1,          | 1: 1,            | 3: 1,            | 3: 1,            | ): 1,            | 5: 1,            | 5: 1,            | 9: 1,            | : 1,             | 5: 1,            | 3: 1,            | 2: 1,            | 3: 1,            |
| .0771: 2, L0662 | 0767: 2, L0804: 2, | .0774: 2, L0775: | .0776: 2, L0659: 2, | H0144: 2, S0374: 2, | 10547: 2, H0684: | H0435: 2, H0626: 2,     | 10627: 2, L0439: 2, | 0756: 2, L0779: 2, | .0758: 2, L0759: 2, | 0605: 2, L0592: 2, | .0593: 2, L0595: 2 | H0543: 2, H0265: | H0686: 1, H0657: | H0484: 1, H0669: | S0356: 1, S0444: | H0675: 1, H0393: | 278: 1, H0613 | H0497: 1, H0331: | H0486: 1, H0618: | H0253: 1, T0048: | H0052: 1, T0110: | H0544: 1, H0246: | H0051: 1, H0355: | H0594: 1, H0039: | H0622: 1, S0368: | H0030: 1, H0376: | H0135: 1, H0038: | H0087: 1, H0272: | H0412: 1, H0413: |
| 07              | 1.0                | 3                | <u>2</u>            | HO                  | <u>H</u>         | OH<br>H                 | E C                 | <u>2</u>           | <u>2</u>            | <u>2</u>           | <u>1</u>           | OH.              | H)               | )HO              | 80               | HO               | <u>80</u>     | OH(              | HO               | OH<br>·          | OH.              | OH<br>H          | )H               | H                | OH .             | OH)              | OH H             | OH.              | OH HO            |
|                 |                    |                  |                     | ,                   |                  |                         |                     |                    |                     | _                  |                    |                  |                  |                  |                  |                  |               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | -                |                  |
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| H0056: 1, H0623: 1,<br>L0564: 1, T0041: 1,<br>S0150: 1, H0633: 1,<br>S0144: 1, H0538: 1,<br>S0210: 1, S0002: 1,<br>L0369: 1, L0506: 1,<br>L0500: 1, L0374: 1,<br>L0765: 1, L0374: 1,<br>L0765: 1, L0374: 1,<br>L0526: 1, L073: 1,<br>L0526: 1, L0783: 1,<br>L0526: 1, L0783: 1,<br>L0526: 1, L0783: 1,<br>L0526: 1, L0783: 1,<br>L0526: 1, L0783: 1,<br>L053: 1, L0666: 1,<br>H0711: 1, H0682: 1,<br>H0670: 1, H0672: 1,<br>H0670: 1, L0780: 1,<br>L0747: 1, L0780: 1,<br>L0757: 1, H0707: 1,<br>L0485: 1, L0599: 1,<br>L0485: 1, L0601: 1. | H0667: 1 and H0008: 1. | LO 748: 23, 30338: 12,<br>H0616: 10, L0750: 8,<br>L0752: 8, L0596: 8,<br>H0031: 7, H0494: 7, |
|   | Tr 10 to Tr 17         | Inr-12 to 1 nr-17,<br>Leu-31 to Met-36,<br>Pro-97 to Lys-103,<br>Gln-126 to Trp-136.         |
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| L0731: 7, L0758: 7 | H0556: 6, H0024: 6, | .0770: 6, L0588: 6, | S0360: 5, S0046: 5, | 774:      | 439: | 749:                | 50:               | 339:     | 551:  | 4.4   | 742:        | 747: | 591:                | 663:    | S0444: 3, H0486: 3, | H0200: 3, H0188: 3, | H0038: 3, H0100: 3, | .0769: 3, L0773: 3, | .0775: 3, S0031: 3, | H0445: 3, H0136: 3, | 543:         | H0624: 2, H0717: 2, | S0212: 2, H0484: 2, | H0255: 2, S0418: 2, | S0408: 2, S0410: 2, | H0393: 2, H0351: 2, | H0411: 2, S0222: 2, | H0592: 2, H0574: 2, | 427:             |
| 01                 | ), HO               | , LO                | , SOC               | J.        | Ġ,   | LO.                 | , S0 <sub>2</sub> | , H0     | i, H0 | , H0  | ,107        | , LO | į,                  | , H0    | , H0                | , H0                | , H0                | , LO                | , SO                | , H0                | , H0         | , H0                | , H0                | , SQ                | , S04               | , H0                | , SO.               | , H0                | H0635: 2, H0427: |
| 31:7               | 56: 6               | 70: 6               | 50:5                | 76: 5     | 47:5 | 40:5                | 55: 5             | 50:4     | 35: 4 | 66: 4 | 26:4        | 43:4 | 57:4                | 70:3    | 4:3                 | 90:3                | 38: 3               | 69:3                | 75:3                | 45: 3               | 42:3         | 24: 2               | 12:2                | 55: 2               | 08:2                | 93: 2               | 11:2                | 92:2                | 35:2             |
| 101                | H05                 | 101                 | <u>S03</u>          | <u>\$</u> | H05  | L0740: 5, L0749: 5, | 120               | S02      | H01   | 107   | <u>S01</u>  | 107  | L0757: 4, L0591: 4, | H01     | <b>S</b> 04         | H02                 | 00H                 | <u>12</u>           | <u>123</u>          | H04                 | H05          | 90 <u>H</u>         | <b>S02</b>          | H02                 | <b>S</b> 04         | H03                 | H04                 | H05                 | H06              |
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| _                  |                     |                     |                     |           | •    |                     |                   | <u>.</u> |       |       | <del></del> |      |                     |         | <del>,</del>        |                     |                     |                     |                     |                     |              |                     |                     |                     |                     |                     | <del></del>         |                     |                  |
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| H0036: 2, H0318: 2, | H0545: 2, H0009: 2, | H0178: 2, H0014: 2, | H0644: 2, H0617: 2, | H0032: 2, H0124: 2, | H0068: 2, H0040: 2, | r0067: 2, H0413: 2, | H0623: 2, T0041: 2, | F0042: 2, S0440: 2, | S0150: 2, H0641: 2, | H0529: 2, L0502: 2, | .0500: 2, L0761: 2, | .0764: 2, L0662: 2, | J0767: 2, L0776: 2, | .0657: 2, L0659: 2, | .0782: 2, L0783: 2, | H0690: 2, H0659: 2, | H0672: 2, S0328: 2, | H0134: 2, H0555: 2, | S3012: 2, L0754: 2, | L0759: 2, L0590: 2, | L0592: 2, L0593: 2, | L0594: 2, H0265: 1, | F0002: 1, H0686: 1, | S0040: 1, S0134: 1, | H0583: 1, H0657: 1, | H0341: 1, S0180: 1, | H0483: 1, H0661: 1, | H0664: 1, S0356: 1, | S0442: 1, S0376: 1, |
|                     |                     |                     |                     |                     |                     | <u> </u>            |                     |                     | <u> </u>            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | - <b>I</b> ., 3.    | <u>. ~ 4</u>        |                     |                     |                     |                     |                     |
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| H0580: 1, S0007: 1 | S0132: 1, L0717: | H0431: 1, H0370: | H0392: 1, H0600: | 10586: 1, H0333: | ,0622: 1, T0060: | 70109: 1, Н0013: | 10250: 1, H0069: | .0021: 1, H0599: | H0575: 1, H0618: | 50182: 1, H0251: | 10263: 1, H0596: | .0738: 1, H0041: | 10081: 1, H0012: | H0620: 1, L0163: | , S0051:  | H0375: 1, H0266: | H0271: 1, H0687: | H0290: 1, S0003: | 30022: 1, H0428: | , H0553: | 10628: 1, H0673: | H0169: 1, L0456: | H0708: 1, S0366: | 30036: 1, H0163: | H0090: 1, H0591: | H0087: 1, L0060: | H0379: 1, H0412: | H0560: 1, S0382: | S0466: 1, S0438: |
| 1, S               | 1,1              | 1, H             | 1, H             | 1, H             | 1, T             | 1, H             | 1, H             | 1, H             | 1, H             | 1, H             | 1, H             | 1, H             | 1, H             | 1, L             | 1, S(     | 1, H             | 1, H             | 1, S             | 1, H             | 1, H     | 1, H             | 1, L             | 1, S             | 1, H             | 1, H             | 1, L             | 1, H             | 1, S             | 1, S(            |
| 580:               | 132:             | 431:             | 392              | )586:            | 622:             | 109:             | )250:            | 021:             | 575              | 182:             | )263:            | 738:             | 081              | 929              | 50388: 1, | 375              | 271:             | 3290             | 022:             | 0194:1   | )628             | 9169             | 3708             | 036:             | 0600             | 087              | 379              | )560             | 466:             |
| H                  | <u>S</u>         | Ħ                | Ħ.               | Ħ                | 3                | <u>1</u> 0       | Ħ                | 3                | Ħ                | 80               | 王                | 3                | Ħ                | Ħ                | <u>8</u>  | 王                | Ħ                | 王                | <u>8</u>         | 3        | Ħ                | Ħ                | Ħ                | S                | Ĭ                | Ĕ                | Ħ                | Ħ                | SC               |
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| H0509: 1. S0210: 1. | L0520: 1, L0762: 1, | L0501: 1, L0765: 1, | L0771: 1, L0521: 1, | L0768: 1, L0387: 1, | L0498: 1, L0375: 1, | L0806: 1, L0655: 1, | L0661: 1, L0807: 1, | L0527: 1, L0382: 1, | L0809: 1, L0519: 1, | L0663: 1, S0428: 1, | S0374: 1, H0723: 1, | H0519: 1, H0593: 1, | H0658: 1, H0648: 1, | H0651: 1, S0330: 1, | H0539: 1, S0378: 1, | H0710: 1, S0152: 1, | H0521: 1, H0522: 1, | S0044: 1, H0576: 1, | S0390: 1, S0028: 1, | S0124: 1, S0032: 1, | L0753: 1, S0434: 1, | L0485: 1, L0581: 1, | L0595: 1, L0366: 1, | ٠ | S0026: 1, H0653: 1, | H0665: 1, S0194: 1, | H0423: 1, H0422: 1, | S0456: 1 and H0352: 1. |                   |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     | -                   |                     |                        | Ser-53 to Pro-60. |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                        | 3189              |
|                     |                     |                     | -                   |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | • |                     |                     |                     |                        | 183 - 380         |
|                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |   |                     |                     |                     |                        | 1014              |
|                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                        | HAOSP50R          |
|                     |                     |                     |                     |                     |                     |                     | •                   |                     | :                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |   |                     |                     |                     |                        | HAOSP50           |

| _                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |         |         |                  |              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |                    |                  |                     | $\neg$             |
|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------|---------|------------------|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|--------------------|------------------|---------------------|--------------------|
|                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |         |         |                  |              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |                    |                  |                     |                    |
|                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |         |         |                  |              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |                    |                  |                     |                    |
|                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |         |         |                  |              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |                    |                  |                     |                    |
|                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |         |         |                  |              |                  | á                |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |                    |                  |                     |                    |
| 0222: 5,             | 770: 4,             | 747: 4,             | 171: 3,             | 766: 3,             | 556: 2,             | 373: 2,             | 266: 2,             | 617: 2,             | 303: 2,             | 518: 2, | 134: 2, | 586: 1,          | H0583: 1,    | 120: 1,          | 722: 1,          | 333: 1,          | 007: 1,          | 009: 1,          | 051: 1,          | 181: 1,          | 708: 1,          | 413: 1,          | 575: 1,          | 375: 1,          | 552: 1,  | 126: 1,            | 539: 1,          | 749: 1,             | 752: 1 and         |
| L0439: 16, S0222: 5, | H0733: 4, L0770: 4, | .0809: 4, L0747: 4, | S0356: 3, L0471: 3, | S0366: 3, L0766: 3, | S0436: 3, H0556: 2, | .0622: 2, H0373: 2, | S6028: 2, H0266: 2, | H0687: 2, H0617: 2, | L0637: 2, L0803: 2, |         |         | .0604: 2, H0686: | S0040: 1, HO | S0001: 1, S0420: | H0729: 1, H0722: | H0619: 1, H0333: | H0318: 1, H0007: | H0052: 1, H0009: | L0163: 1, H0051: | H0428: 1, H0181: | S0364: 1, H0708: | H0135: 1, H0413: | 30440: 1, L5575: | L0764: 1, L0375: | L0378: 1, L0652:   | L0438: 1, S0126: 1 | H0658: 1, H0539: | L0740: 1, L0749: 1, | L0779: 1, L0752: 1 |
| Pro-11 to His-21,    | Glu-30 to Glu-41,   |                     |                     | ٠,                  | Pro-116 to His-124. |                     |                     |                     |                     |         |         |                  | <u> </u>     |                  |                  |                  |                  |                  |                  |                  | <u> </u>         |                  |                  |                  | The second secon |                    |                  |                     |                    |
| 3190                 |                     |                     |                     |                     |                     |                     |                     |                     |                     |         |         |                  |              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |                    |                  |                     |                    |
| 3 - 509              |                     |                     |                     |                     |                     | •                   |                     |                     |                     |         |         |                  |              |                  |                  |                  |                  |                  |                  | -                |                  |                  |                  |                  |  |                    |                  |                     |                    |
| 1015                 |                     |                     |                     |                     |                     |                     |                     | · e                 |                     |         |         |                  |              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |                    |                  |                     |                    |
| HAOSS30 HAOSS30R     |                     |                     |                     | •                   |                     | •                   |                     |                     |                     |         |         |                  |              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |                    |                  |                     |                    |
| HAOSS30              |                     |                     |                     |                     |                     |                     |                     |                     |                     |         |         |                  |              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |                    |                  |                     |                    |

|           |   |                   |                     | -                   |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -                   |                     |                     |                     |                         |                     |                     |                     | ,                   |                     |                     |                     |
|-----------|---|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|           | pı  |                   |                     |                     |                     |                     |                     |                     |                     |                     |                     | · '                 |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     | <u> </u>            |                     |                     |                     |
| L0758: 1. | H0686: 2, L0362: 2,<br>H0100: 1, H0646: 1 and | L0766: 1.         | L0777: 8, L0754: 6, | L0662: 4, L0766: 4, | S0136: 3, S0406: 2, | L0744: 2, L0780: 2, | L0752: 2, L0594: 2, | H0556: 1, H0686: 1, | S0418: 1, S0376: 1, | S0360: 1, H0580: 1, | H0587: 1, H0486: 1, | S0280: 1, L0021: 1, | L0105: 1, H0428: 1, | L0055: 1, H0212: 1, | H0040: 1, S0422: 1, | L0639: 1, L5575: 1, | L0772: 1, L0372: 1, | L0764: 1, L0794: 1, | L0522: 1, L0803: 1, | <br>L0665: 1, H0144: 1, | H0547: 1, H0519: 1, | H0684: 1, H0659: 1, | H0670: 1, L0748: 1, | L0756: 1, L0757: 1, | L0758: 1, L0759: 1, | L0596: 1, L0589: 1, | L0605: 1, L0599: 1, |
|           | His-1 to Phe-7,<br>Pro-16 to His-26,          | Asp-44 to Ser-52. |                     |                     |                     |                     |                     |                     |                     |                     | •                   |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |
|           | 3191  |                   | 3192                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |
|           | 2 - 508                                       |                   | 93 - 317            |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |
|           | 1016  |                   | 1017                |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |
|           | HAOSU85R                                      |                   | HAOSW92 HAOSW92R    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |
|           | HAOSU85                                       |                   | HAOSW92             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                         |                     |                     |                     |                     |                     |                     |                     |

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|------------------------|--------|----------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------|-----------|--------------------|-----------|--------------------|------------------|-------------|-------------|-------------|-------------|--------------------|--------------------|
| }                      |        |          |                     |                     |                     |                    |                    |                    |                    | •                   |                    |                    |                    |                    |                    |                    |                    |                  |           |                    |           |                    |                  |             |             |             |             |                    |                    |
|                        |        |          |                     |                     |                     |                    |                    |                    |                    |                     |                    |                    | •                  |                    |                    | •                  |                    |                  |           |                    |           |                    |                  |             |             |             |             |                    |                    |
| l and                  |        |          | 6,                  |                     |                     |                    | ~î                 |                    |                    |                     |                    |                    |                    | •                  |                    |                    |                    |                  |           |                    |           | •                  | l,               |             | -           |             | •           | <u>.</u>           | _                  |
| H0667: 1, H0542: 1 and | 1.     |          | L0756: 6, L0777: 6, | S0408: 5, L0770: 5, | H0547: 5, S0360: 4, | .0665: 4, H0624: 3 | H0687: 3, H0170: 3 | H0686: 2, L0717: 2 | H0497: 2, L0163: 2 | .0794: 2, L0766: 2, | S0126: 2, L0752: 2 | L0731: 2, H0657: 1 | H0656: 1, L0808: 1 | H0341: 1, S0282: 1 | S0442: 1, S0354: 1 | S0045: 1, S0222: 1 | H0486: 1, L0586: 1 | H0156: 1, H0575: | 1, H0581: | H0052: 1, L0738: 1 | 1, H0553: | H0169: 1, S0036: 1 | H0087: 1, H0413: | l, L0598: 1 | l, L0763: 1 | l, L0764: 1 | 1, L0776: 1 | .0658: 1, L0659: 1 | L0809: 1, L0789: 1 |
| H0667:                 | H0506: |          | L0756:              | S0408: 5            | H0547:              | L0665: 4           | H0687:             | H0686: 2           | H0497: 7           | L0794: 2            | S0126: 2           | L0731: 2           | H0656:             | H0341:             | S0442: 1           | S0045: 1           | H0486:             | H0156:           | H0318:    | H0052:             | H0266: 1  | H0169:             | H0087:           | S0422: 1    | L0520: 1,   | L0638: 1,   | L0803: 1    | L0658: 1           | L0809: 1           |
|                        |        |          | Ile-3 to Asp-9.     |                     |                     |                    |                    |                    |                    |                     |                    |                    |                    |                    |                    |                    |                    |                  |           |                    |           |                    |                  |             |             |             |             |                    |                    |
|                        |        | 3193     | 3194                |                     |                     |                    |                    |                    |                    |                     |                    |                    |                    |                    |                    |                    |                    |                  |           |                    |           |                    |                  |             |             |             |             | ٠                  |                    |
|                        |        | 3 - 107  | 336 - 485           | <del></del>         |                     |                    | ,                  |                    |                    |                     |                    | •                  |                    |                    |                    |                    |                    |                  |           |                    |           |                    |                  |             |             |             |             |                    |                    |
|                        |        | 1018     | 6101                |                     |                     |                    |                    |                    | ·                  |                     |                    |                    |                    |                    |                    |                    |                    | •                |           |                    |           |                    | •                |             |             |             |             |                    |                    |
|                        |        | HAOTB47R | HAOTB58 HAOTB58R    |                     |                     |                    |                    |                    |                    |                     |                    |                    |                    |                    |                    |                    |                    |                  |           |                    |           |                    |                  |             |             |             |             |                    | _                  |
|                        |        | HAOTB47  | HAOTB58             |                     |                     |                    |                    |                    |                    |                     |                    |                    |                    |                    |                    | ٠                  |                    |                  |           |                    |           |                    |                  |             |             |             |             |                    |                    |

| Γ                   |                     |                     |   | _                   |                     |                     |                        |           |                       |                      |                      |                     |                   |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     | $\neg$              |
|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|------------------------|-----------|-----------------------|----------------------|----------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     |                     |                     |   | ,                   |                     |                     |                        |           |                       |                      |                      |                     |                   |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                        |           |                       |                      |                      |                     |                   |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                        |           |                       |                      |                      |                     |                   |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     | ,                   |                     |                     |
|                     |                     |                     |   | ٠                   |                     |                     |                        |           |                       |                      |                      |                     |                   |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |
| L0664: 1. S0374: 1. | H0520: 1, H0659: 1, | H0670: 1, H0672: 1, | H0436: 1, S0028: 1,                     | .0439: 1, H0445: 1, | .0589: 1, L0608: 1, | S0192: 1, H0543: 1, | H0423: 1, S0424: 1 and | .0600: 1. | L0747: 28, S0192: 21, | 0659: 17, L0740: 12, | .0757: 10, S0360: 9, | H0545: 9, L0662: 9, | 775: 9, L0665: 9, | .0439: 9, L0664: 8, | S0358: 7, L0666: 7, | .0750: 7, L0601: 7, | ,0777: 6, L0731: 6, | .0471: 5, S0003: 5, | H0038: 5, H0547: 5, | S0206: 5, L0748: 5, | 0756: 5, L0752: 5, | .0758: 5, S0011: 5, | 30026: 5, T0049: 4, | .0717: 4, H0575: 4, | H0012: 4, H0620: 4, | H0083: 4, H0090: 4, | .0770: 4, L0764: 4, | .0794: 4, L0766: 4, | .0804: 4, L0375: 4, |
| ľ                   | E<br>E              | Ě                   | E .                                     | Š                   | Ö                   | <u>S</u>            | 呈                      | <u>Š</u>  | ĭ                     | <u>Š</u>             | 2                    | H                   | 3                 | <u> </u>            | 80.                 | 2                   | 2                   | <u>3</u>            | 品                   | <u>S</u>            | <u>2</u>           | <u>2</u>            | <u>80</u>           | 2                   | 울                   | H                   | 3                   | <u>S</u>            | <u>10</u>           |
|                     |                     |                     |   |                     |                     |                     |                        |           |                       |                      |                      |                     |                   |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     | í                   |                     |                     |                     |                     |
| -                   |                     |                     | <del></del>                             |                     | ····                |                     |                        |           | 5                     |                      |                      |                     |                   |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                        |           | 3195                  |                      |                      |                     |                   |                     |                     |                     |                     |                     |                     |                     |                    | •                   |                     |                     |                     |                     | ٠                   |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                        |           | 209 - 340             |                      |                      |                     |                   |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |
|                     |                     |                     |   |                     |                     |                     |                        |           | 1020                  |                      |                      |                     |                   |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |
|                     | -                   | -                   | - · · · · · · · · · · · · · · · · · · · |                     |                     | -                   |                        |           | HAOTD32R              |                      |                      |                     |                   |                     |                     |                     |                     |                     |                     |                     |                    | ,                   |                     |                     |                     | <del>.</del>        |                     |                     |                     |
|                     |                     |                     | ,-                                      |                     |                     |                     |                        |           | HAOTD32               |                      |                      |                     |                   |                     |                     |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |                     |                     |                     |                     |